ENGINEERING NEWS-RECORD

Major General
EWART G. PLANK
mdr., Philippines Base Section
Army Forces Western Pacific

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3000-TONNERS
ride this shipyard shuttle

Hauling ships out of the river and transferring them to a repair area is the job of this G-E engineered system at Commercial Iron Works

The conductor of this unusual "trolley line"—a West Coast installation—handles ships in and out of water with the greatest of ease, thanks to the unique control system engineered by General Electric.

Three 200-horsepower G-E motors do all the hauling. The conductor simply remains in the control house, turns certain handles, and the cradles that hold the transfer carriage are moved into position, all slack is taken up, and the job of moving a ship is under way.

In co-operation with the builders, G-E engineers, experienced in many kinds of construction problems, designed a system that stands up under tough operating conditions. Affording the complete flexibility desired by the shipyard, the equipment is easy to control, easy to maintain, and has built-in safety features that reduce the hazards of moving ships rapidly.

At General Electric you will find an answer to the electrical engineering problems involved in construction projects. A call to our nearest office will put you in touch with G-E men who are familiar with your type of work. *Apparatus Department, General Electric Co., Schenectady 5, N. Y.*

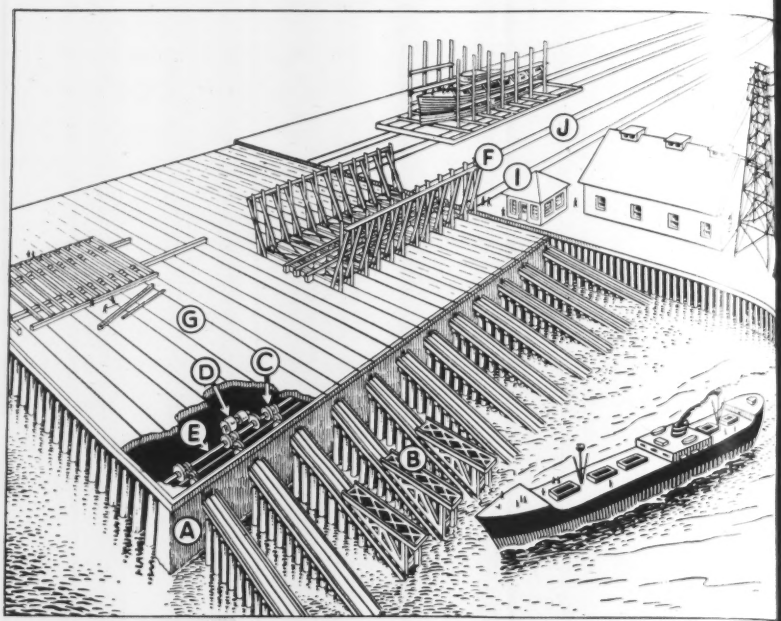
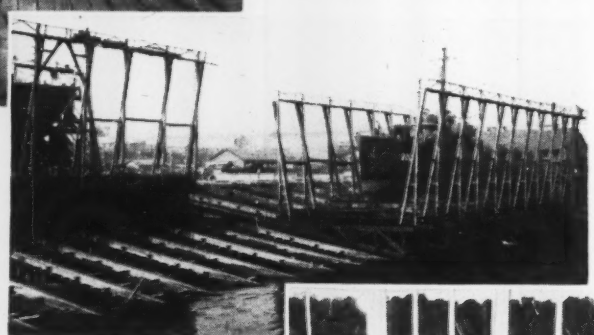


Diagram of shipyard: **(A)** is the headwall behind which is the ma... haulage shaft **(E)**, powered by 200-hp G-E motors **(D)**. **(C)** is one of the winches used to take up slack on the cradles **(B)**. The shu... area **(G)** has rails for moving the transfer carriages **(F)** in line with rails in the repair section **(J)**. Operator in the control house ... handles entire job through directions received by telephone.

View of shipyard looking across shunt area. Ship is in transfer carriage on cradles raised to shunt level.



Here, two carriages are in use. Piling reaches 300 feet into the river on a ... per-cent grade.

Control bench with wind... control handles, and mas... ter switch for haulage shaft at left. Control for shunt area hauling is at right.

ELECTRIC EQUIPMENT FOR THE CONSTRUCTION INDUSTRY

GENERAL ELECTRIC

655-50-162

The Week In Engineering and Construction

GINEERING NEWS-RECORD • NOVEMBER 8, 1945 • VOLUME 135 • NUMBER 19

Council hears supplies will fill building needs

Construction Industry Advisory Council is told lumber and most other supplies will be adequate—Slow OPA action to speed construction is criticized

dequate supplies of labor and build- materials—including lumber—will vailable to the construction indus- within a few months, industry ers said at Washington last week. he talks were made before some 250 esentatives of engineers, contrac- and manufacturers who attended eeting of the Construction Indus- Advisory Council, an organization ational trade and professional asso- ions sponsored by the U. S. Cham- of Commerce.

ohn C. Stevens, consulting hydrau- engineer of Portland, Ore., and ident of the American Society of l Engineers, acted as chairman at one-day meeting.

peakers, who included John L. nes, director of the construction ion in the Bureau of Foreign and mestic Commerce; Douglas Whit- , chairman of the advisory board he Producers' Council; Norman P. on, vice-president of the National ail Lumber Dealers' Association; Edward P. Palmer, president of ior and Palmer of New York and -president of the A.G.C., gave this ure of the supply outlook:

. Inasmuch as relatively little new truction will start during the next months, suppliers can catch up with ected demand in that time.

. Although present inventories of k, cast iron soil pipe, and lumber "extremely low", OPA price in- ases recently granted (*ENR* Sept. vol. p. 399) will be effective in viding adequate quantities of these ns. Increases granted on cast iron pipe have raised production from 000 to 17,000 tons monthly, it was d.

. The lumber industry expects to duce 28 billion b.ft. this year de- te strikes, and some 30 billion in 6.

4. A.G.C. surveys indicate that contractors will be able to handle the volume of construction expected of them. Assuming equipment and labor are made available, the association concludes that contractors can meet demands.

Only four major classes of products required in large quantities for housing construction were seen as continuing to be scarce. These were listed as stock millwork, major electric appliances, enamelled ware plumbing fixtures, and boilers and radiators.

Commenting on the housing picture in general, Mr. Mason supported his prediction that adequate lumber would be available by attacking the National Housing Agency's announcement that 1946 housing would have to be curtailed, and what he said was the com-

(*Continued on p. 2*)

1946 building estimate up to $7.3 billion

Construction in 1946 is expected to increase by 60 percent over the 1945 volume and to total $7.3 billion, according to William H. Shaw, of the Construction Division in the Department of Commerce.

The Commerce department calculations indicate that by the end of the next year the U. S. should be building at an annual rate of better than $9 billion, with a goal of at least $12 billion in 1947.

A breakdown of the $7.3 billion total shows that $5.2 billion of private work is expected in 1946. This construction is made up as follows: Residential (nonfarm), $2 billion; industrial, $1.15 billion; farm, $400,000,000; other non-residential buildings, $850,000,000; and public utility, $800,000,000.

Public construction is expected to total $2.07 billion. This work was listed as follows: Residential, $20,000,000; military and naval, $150,000,000; Industrial, $50,000,000; other nonresidential buildings, $400,000,000; Highways, $800,000,000; sewer and water, $300,000,000; conservation and development, $250,000,000; and all other, $100,000,000.

Six-point program to aid housing

John W. Snyder, Director of War Mobilization and Reconversion, told the Construction Industry Advisory Council last week his office was well aware of the need to assure an early start of construction, and that he planned a six-point program of action that should be especially helpful to housing construction. Snyder's program is as follows:

1. Through inter-agency action the supply of scarce building materials will be increased, and where necessary price and wage increases and priorities will be granted to break bottlenecks in housing.

2. The War Production Board, which became the Civilian Production Administration, is strengthening inventory controls to prevent hoarding of building materials.

3. The OPA will strengthen price control over building materials to counteract inflationary pressure.

4. The federal credit agencies will do everything possible to discourage excessive and unsound lending on mortgages on housing.

5. Representatives of industry groups are to be called to Washington to map out with government a voluntary program to increase quickly the production of all materials and facilities needed for an expanded home-construction industry, and to help fight inflated building costs and real estate prices.

6. The National Housing Agency, in conjunction with industry representatives will provide an information and advisory service on home values available to any prospective home buyer regardless of federal assistance.

Hear materials will be available

(*Continued from first page*)

monly accepted view that 12,000,000 homes would be needed in the next decade.

"Construction at this rate would mean that we would be replacing better than a quarter of the nation's existing homes," he added. "NHA's estimate of only 400,000 homes in 1946 (because of lumber shortage) would only require 4 million b.f."

There are no unsolvable labor problems now facing the construction industry, Mr. Palmer said.

"At the moment, the matter of work stoppages is claiming great public attention," Mr. Palmer added. "The record of the building and construction trades in this respect is infinitely better now than that made in most other industries.

"This has been due to the close association between employer and employee; the practice of writing agreements in definite language, and the mutual understanding that has resulted from close contact and many negotiations."

Richard J. Gray, acting chairman of the executive council, A.F.L. Building and Construction Trades Department, added that ample workers will be available as soon as more servicemen are released to private life. However, he said, that upward adjustments in wage rates will be necessary. The A.F.L. was said to be starting an increasing number of apprentice training programs throughout the country.

Many problems unsolved

Despite the assurances that materials and labor would be available, several major unsolved problems were cited. One of these is the obsolete building codes of some cities.

A factor delaying sewerage, water supply and other public works construction by cities is the failure of Congress to decide whether or not federal-aid is to be provided for this type of work, George W. Howson, of Alvord, Burdick & Howson, reported. Uncertainty of building costs was another delaying factor he mentioned.

The question of government controls, especially those of the Office of Price Administration, also came in for a great deal of discussion. Emphasis was placed on the need to assure quicker action by the OPA when price adjustments are requested. In connection with this difficulty it was pointed out that the recent price rise granted for brick (*ENR* Sept. 27, vol. p. 399) required several months of negotiation. Such adjustments must be made more quickly and with less work on the part of the industry, some of the speakers concluded.

There was also the general demand that the OPA not attempt to put price ceilings on newly constructed homes. This program was considered unnecessary and unworkable. It was also urged that OPA rental ceilings on new housing be eliminated to encourage this type of work to go ahead.

Army engineers study Philippine port work

A 5-man board of U. S. Army Engineers is now in the Philippines making studies of ports and harbors to determine how these facilities can best be rehabilitated. They are working in close cooperation with American highway engineers whose presence in the islands making surveys of road needs (*ENR* Oct. 25, vol. p. 546) was revealed last week.

Members of the harbor board are Col. C. L. Hall, until recently division engineer at Columbus, Ohio; Lt. Col. Sherwood B. Smith, Office of Chief of Engineers, Washington, D. C.; Lt. Col. Harry Pockras, district engineer, Huntington, W. Va.; B. R. Wood, chief of the engineering division, Office of the Chief of Engineers; and C. F. Wicker, principal engineer, Philadelphia district.

Housing price ceiling still sought by OPA

At hearings last week before the Senate Small Business Committee, Administrator Chester Bowles of the Office of Price Administration urged that Congress give the OPA power to place price ceilings on new homes.

Although similar demands were made several weeks ago, as yet no bills have been introduced in Congress to give OPA the necessary power. However, the issue is still a very live one and during the hearings John Snyder, director of the Office of War Mobilization and Reconversion, said he favored stronger controls.

The general opinion in Washington is that a bill giving OPA the power sought may be introduced soon. It is thought that the demand will be to permit OPA to fix the ceiling price for any existing home automatically at the first price it sells for after passage of the bill. It is also expected that the measure would empower OPA to establish ceiling prices on new homes on a "cost-plus" basis to permit a percentage of profit.

Because enforcement of such a law would be so great a task, opponents of the proposed legislation claim that the ceilings even if approved would have little effect.

Build landing field atop Oregon building

Probably the first office-building autogyro and helicopter landing field on the West Coast is now under construction at Portland, Ore., for the Columbia Distributing Co.

The company's waterfront structure now nearing completion, occupies an 80x460-ft. plot, and is being built at a cost of about $500,000.

The proposal to turn the top of the 2-story building into a landing field is credited to Chris Maletis, president of the distributing company, and an ardent autogyro owner. The building is designed for the eventual addition of a third story and is therefore of heavier construction than normal. No additional engineering was required to make provisions for use of the present roof as a landing field.

Since the structure is on the west side of the Willamette River, somewhat south of the city's business district, it is in an area of relatively low structures. No difficulty from wind conditions is anticipated. There will be no hangar construction on the roof but provision for fueling planes is included in the plan.

Architects are Wolff and Phillips, Portland, and the contractor is Ross B. Hammond Construction Co.

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Contractors can execute new work if materials, manpower are available

A.G.C. board reviews industry's capabilities—Considers labor, materials instability, chief construction block

Shortages of certain building materials, availability of manpower and equipment, and the potential capacity of the construction industry to cope with the impending construction program were chief items of discussion at a board meeting of the Associated General Contractors of America, held in Chicago Oct. 29-31.

In a frank appraisal of the contractors' position in the current and future construction program, H. E. Foreman, managing director, declared that a recent survey among general contractors disclosed ample capacity to execute the work for which plans have been prepared, financing arranged and sites secured, provided manpower and materials are made available.

Unstable wage conditions and unpredictable trends in the price of materials have resulted, in several instances, in inadequate bidding on some projects recently placed on the market, said Mr. Foreman. Moreover, these current conditions make it difficult for responsible c ntractors to offer acceptable contract bids. Such action, he warned, can lead to work being undertaken on a day labor basis, which is adverse to the association's policy of the "one-contract, single responsibility" method of construction.

Attendance at the three-day session was nearly 150. It included the association's governing and advisory boards, national officers, principal members of the Washington staff, chapter secretaries and branch managers.

Plans were announced for the 27th annual meeting to be held on Feb. 18-21, 1946, at the Stevens Hotel, in Chicago. Attendance at this meeting, which will be the first assembled convention since the spring of 1942, is expected to reach 1,000.

Bellows to be new president

At the close of the session the following men were nominated for election to office for 1946: W. S. Bellows, Houston, Tex. for president and F. W. Parrott, Sioux City, Iowa, for vice-president. H. A. Dick, Portland, Ore. is incumbent president.

Some 60 chapter secretaries and branch managers held their regular quarterly meeting on Monday, preceding the two-day board meeting. Verne Warren of Spokane, Wash. was elected chairman of the Secretaries' Council to succeed Frank H. Conner who had resigned. Milo P. Flickinger, Springfield, Ill. was named vice chairman and Hugh J. Connelly, Trenton, N. J., was elected secretary. All three will serve until the end of 1946.

Two developments in the construction industry were viewed with considerable disfavor by the assembled contractors. One was the recent request by the Public Roads Administration for contractors to submit a tabulation showing unit purchase prices and quantities of 15 basic construction materials for each project, prior to its final settlement.

Also protested is proposed national legislation to regulate the amount and tempo of new construction. This was viewed as a governmental attempt to regulate the construction industry and one that might approach a form of permanent governmental control.

Increased membership

Membership in the A.G.C. increased from 3,164 on January 1, 1945, to 3,300 at present. Two new chapters have been added: the Associated Municipal Contractors Association of Texas, with headquarters at Dallas, and the Tacoma chapter of the A.G.C. at Tacoma, Wash.

Approval was given to increase the number of directors for the larger districts, to provide more equitable representation. Under the new provision, one additional director at large will be named to a district for each 100 members in excess of 250.

Based on present membership, District 2 (Arizona, California and Nevada), is entitled to three new directors. District 4 (Arkansas, Oklahoma, Louisiana and Texas) will get one new director, as will District 11 (District of Columbia, Maryland, Delaware, New Jersey, Pennsylvania and New York).

Arthur S. Horner, of Denver, Colo., was elected director of District 3 to fill the vacancy created by the recent resignation of C. B. Berry, of Denver.

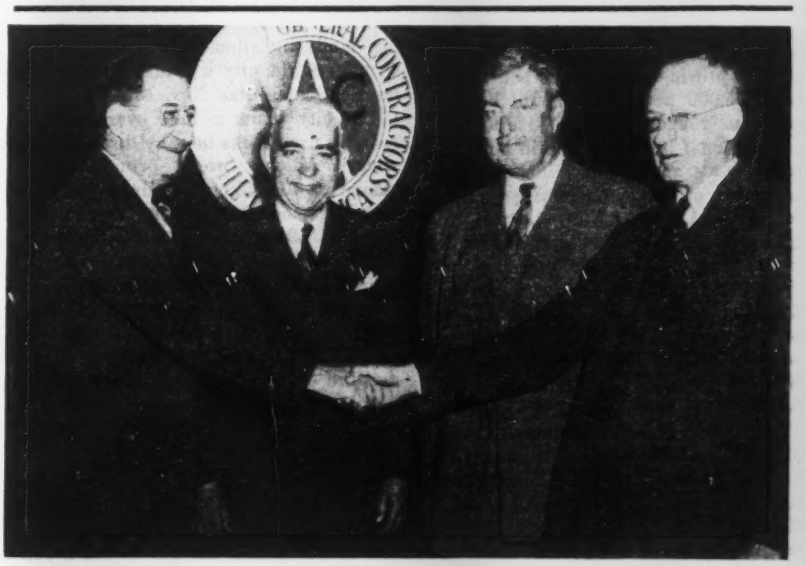
In keeping with the trend of the times the association announced a new slogan, "America Progresses Through Construction." Forthcoming publicity will be centered on this theme rather than the old slogan adopted in June, 1943, "This is Blueprint Time".

Bridge authority repaid for plane crash damage

Damages, caused when a Navy plane crashed into the Oakland-San Francisco Bay Bridge in 1943, were settled Oct. 22 when Congress appropriated $12,676.83 to repay the California Bridge Authority for repairs. (*ENR*, Sept. 23, vol. p. 444)

One 2¼-in. suspender cable in a group of four that took the direct impact of the crash had to be replaced, and other minor repairs to the huge suspension span were necessary.

The single seater fighter plane struck 160 ft. above the bridge deck.



H. E. Foreman, managing director of the A.G.C., shakes hands with F. W. Parrott incoming vice-president. Looking on, at Mr. Foreman's left, are H. A. Dick, retiring president, and W. S. Bellows, incoming president.

Senate group favors $375,000,000 of federal-aid for hospitals

Recommends $75,000,000 annually for 5 years for construction and $5,000,000 immediately for studies and planning—Extensive hospital work considered necessary

Appropriation of $75,000,000 of federal-aid annually for five years for constructing additional hospital facilities throughout the country was recommended last week by the Senate Committee on Education and Labor. This help was seen necessary after the committee had held extensive hearings on a bill (S. 191) introduced last Feb. 14 and originally providing $100,000,000 yearly.

The committee also recommended that $5,000,000 be provided for surveys and planning. Although the first year's money for construction would not become available until the start of the fiscal year 1947, or July 1, 1947, the planning money would be allotted immediately upon passage of the bill.

Much construction needed

In its favorable report on the bill, the committee outlined the need for extensive construction. It reported that the money provided in the measure equals only about 20 percent of the total estimated costs of the hospital and public health facilities designated by the Surgeon General's office as needed. Preliminary estimates show that approximately 165,000 additional beds will be required for general hospitals alone. This work does not include the replacement of obsolete facilities, which are estimated at 66,000 beds.

Early studies also show that sufficient new tuberculosis hospitals should be built to provide 60,000 more beds. Also, some 16,000 new beds should be provided to replace obsolete facilities.

Additional beds required in hospitals for nervous and mental illnesses were estimated at 115,500. Nearly as many replacement beds in hospitals of this type also are seen necessary, desired replacements totalling 97,000 beds.

In addition, the committee found that 14,000 public health centers will be needed eventually. The bill as reported out would provide aid for the construction on the basis of one health center for each 30,000 population.

The committee found that the total need for chronic disease hospitals was hard to estimate. However, these facilities are considered grossly deficient throughout the country and the committee decided that considerable aid should be provided for this type of facilities.

As originally written, the bill named three factors as the bases for allotment—population, financial need, and relative need for hospital construction in the various states. In contrast, the committee was of the opinion that relative need for hospital construction, as such, could not be used as an allotment factor, since no statutory definition of this need was considered practicable in advance of detailed surveys. The financial needs of the states was believed to offer an approximate index of their construction needs, since it could be evaluated in terms of per capita income. The formula thus adopted by the committee gives extra weight to the index of financial capacity.

The planning money would be allotted on the ratio of the population of a state to that of the total of the United States. However, no state would be supplied less than $10,000.

Construction plant head leaves TVA to join Main

R. T. Colburn, head of the Construction Plant Division of the Tennessee Valley Authority since 1937, and with TVA since 1933, has left that position to join the organization of Chas. T. Main, Inc., consulting engineers of Boston, Mass. Mr. Colburn will be project engineer in charge of a newly established office at Augusta, Ga., where design is being done on the Clarks Hill Dam for the U. S. Corps of Engineers. This is a $35,000,000 flood control and power project on the Savannah River.

R. T. Colburn

Raymond E. Martin, who has been principal assistant to Mr. Colburn for the last several years, has been made construction plant engineer. He joined TVA in 1935 and has been responsible for construction layout, purchases, and adaptations and sales of equipment needed for dam construction.

N. Y. to acquire land for Brooklyn civic center

New York City last week moved to activate a $32,000,000 project to create a new civic center at the Brooklyn end of the Brooklyn Bridge, when the city's Board of Estimate voted to acquire needed land for the improvement.

The civic center planned will cost about $20,000,000, engineers estimated, with the remaining $12,000,000 going for land and demolition of existing structures, the city will take title to the land not later than Nov. 15.

The city plans to take over an area roughly five blocks long by three blocks wide. Adams Street—principal entrance to Brooklyn Bridge—will be widened from its present 60-ft. roadway to 160 ft. Other plans call for the erection of a $9,350,000 Supreme Court building, a new office building for the Board of Transportation, and other structures to house the Family Court, the Domestic Relations Court and the city Welfare Department.

Adjoining the civic center, the city plans to erect a $6,000,000 housing development, to be known as Concord Village.

The Colonial Development Board at London, England, has authorized a $6,000,000 construction program for immediate activation in the Mediterranean colony of Cyprus.

Apprentice training plan adopted in Connecticut

The Connecticut State Housing Authority has established an apprentice training plan for returned veterans and others desirous of entering the construction field, as artisans. The Connecticut Building Trades and Construction Council, the State Apprenticeship Council, and the Apprenticeship Training Service of the War Manpower Commission have cooperated to set up standards for the masonry and carpentry trades. These standards have been approved by a joint commission composed of general contractors and labor men.

These apprentice standards give credit for previous training. Practical experience in the actual construction of buildings is a part of the course and this is supplemented by technical or state trade school training. Eighteen employment service offices in the state are aiding the work.

Remains on Harvard staff

Karl Terzaghi, whose appointment as a non-resident lecturer and research consultant at the University of Illinois was announced in our issue of Sept. 27, vol. p. 410, will continue as a regular part-time member of the faculty of engineering at Harvard University. This fact was not made clear in the earlier announcement.

OUR ENGINEER GENERALS

Commander, Philippines Base Section, Army Forces Western Pacific

Former Commander, Advance Section, Communications Zone, European Theater

MAJ. GEN. EWART G. PLANK

Anyone in Manila familiar with the saying current during the European war that as soon as the Germans were polished off America would "concentrate all her energies on the Japs" may well have recalled this threat one day last July when a dark, genial and relatively short but stocky Engineer general officer arrived in their city. For, unless the extra new star on his shoulder had changed him (an unlikely possibility), he came not only ready for immediate work himself, but with work plans drawn in detail for everybody else who was to be under his command.

This particular bundle of "concentrated energy" was Maj. Gen. Ewart G. Plank, and he had come to take over a job similar to one he had made famous in Europe (and vice versa)—as commander of the advance section of the Services of Supply. His men would accompany the armies in the invasion of Japan, dealing them the supplies and the special services they would need to keep rolling. And incidentally, as in Europe, he would be known as Eddie Plank and not as Ewart—a perfectly good but uncommon name that his classmates and instructors at West Point discarded for him on his first day at the Academy back in 1918, and which no one but the War Department paymaster and his mother now use.

Since the Japanese invasion did not come off, there was no need for supplying our forces as they fought their way first onto Kyushu and then onto Honshu and overland to Tokyo, and General Plank found himself without a job. Ten minutes later, as a result of an easy decision by his superior officer, Lt. Gen. W. D. Styer, commanding general, S.O.S., of AFWESPAC (Army Forces, Western Pacific), he was head of the Philippines Base Section, AFWESPAC, an assignment of top importance considering our compelling responsibilities and commitments respecting both civil and military construction in Manila and the islands generally. Although he missed his "fighting-war" job in the Pacific, General Plank has a post-war job there that involves all of its ingredients except bullets. That this 48-year-old general is a happy choice for our difficult task in the Philippines is evident from his record in the European war and during two decades of peacetime military and construction experience in the Corps of Engineers.

Among all ranks and in all branches of our forces in the European Theater

Maj. Gen. Ewart G. Plank

of Operations it was widely conceded that General Plank's job as commanding general of ASCZ or Adsec (Advance Section, Communications Zone) was tougher, more exacting and, in the last analysis, more critically important than that of any other Engineer general. His was the responsibility, be it noted, for handing to the Armies and the Air Forces, almost literally in person, the ammunition, food, hospitals, bridges, roads, equipment repair facilities, etc., that they required, and without which they could not function.

The last link in the chain of supply and the first purveyor of services, the job was a hot spot that never cooled off. The direct line of command was to Lt. Gen. John C. H. Lee, commander of the Communications Zone and an Engineer officer himself, but General Plank's daily contacts were with the fighting commanders—Generals Simpson of the Ninth Army, Hodges of the First and Patton of the Third, to say nothing of the multitudinous corps and divisional generals. No one in the Army had more bosses, more conveniently placed to break him and with power enough to do it, than did the commander of Adsec. The fact that these men, completely dependent upon General Plank's supplies and services, were invariably his staunchest supporters, is perhaps the best proof of his success and ability.

To say that General Plank's bosses thought he was the best man in the Army for his job does not mean that they were always satisfied with the service that they received. No field army leader is ever satisfied with what he has, or even with what he knows is the most he can expect, and those in the E.T.O. were no exception. Not a day passed but that Plank was on the receiving end of a hell-raising from some important quarter, with the result that his days and nights were a continual round of high-pressure conferences and arguments. That he also was on the giving end of frequent hell-raising in his own organization goes without saying, otherwise Adsec could not have been kept on its toes 24 hours a day from D-Day in Normandy to D-Day in Berlin.

A little more detail on what Adsec was and did will be helpful in revealing General Plank's contribution to victory in Europe. It all began in England in January, 1944, when General Plank, (who during the previous 15 months had been commander of the Eastern Base Section of the U. S. Army Forces in the British Isles while it was building the great majority of the airfields for our Eighth Air Force as well as many camps, depots and training facilities for our troops) was given the secret assignment of developing a supply organization to spearhead our European inva-

(*Continued on page* 10)

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NEWS IN BRIEF

In telegraphic form, here are further news developments on the engineering and construction front during the week.

Highways—CLEARWATER COUNTY, Idaho, has built electro-magnets into roadworking equipment to clear nails, bolts, metal from roads. . . . OHIO will take bids Nov. 27 for the $100,000 Memorial Shoreway in Cleveland. . . . NEW JERSEY has approved a total of $809,090 in state-aid borough and township road work. . . . With 31 contracts involved at a total cost of $1,435,000, KANSAS highway commissioners debated whether to call on bonding companies to finish the war-halted work. . . . BOSTON discussed a new traffic artery that would include a new bridge across the Charles River. . . . PRA reported traffic on rural roads jumped 37 percent in September. . . . LOUISIANA offered aid to parishes in the form of reimbursement for gravel surfacing.

Sewage disposal— CHICAGO received an FWA grant of $392,684 to finance planning for an estimated $47,000,000 of sewer facilities. . . . The INDIANA State Finance Committee approved loans totalling $105,400 to aid South Bend, Elkhart and Bristol in planning sewerage systems and disposal plants.

Water Supply—SAGINAW, Mich., continued making plans for a 70-mile aqueduct to Lake Huron, estimated to cost between $7 and $10 million dollars. . . . LONG BEACH, Calif., prepared plans for a $650,000 water treatment plant to handle 25,000,000 gpd. . . . Municipal water system of PHOENIX, Ariz., reported a profit of $159,411 net for quarter ended Sept. 30. . . . AKRON, Ohio, considered an engineers' recommendation for expenditure of $1,899,000 to insure future water requirements.

Construction—SEATTLE, Washington, planned a $37,000,000 public improvement program that includes street work, public buildings and maintenance. . . . The SAN DIEGO, Calif., section of the Institute of Aeronautical Sciences announced it would build a $165,000 auditorium, available to all engineering groups. . . . An addition to the Hilton Hotel, LONG BEACH, Calif., will cost $1,250,000 and include a helicopter landing space. . . . Station WCAU, PHILADELPHIA, plans a $2,000,000 building for television and sound broadcasting. . . . BOSTON bus companies will build a $1,000,000 terminal on St. James Ave.

Miscellany—Two large RCAF barracks at Malton Airport, near TORONTO, Canada, will be turned over to the city to help solve housing shortage. . . . CANADA will spend "several million dollars" in an expansion program at the airport owned by Vancouver, B. C., at Sea Island. . . . PITTSBURGH, Pa., passed a re-zoning ordinance permitting construction of apartment houses on fashionable Fifth Avenue to within one block of Carnegie campus.

Take Memphis bridge bids

The Department of Highways and Public Works of Tennessee, and the Arkansas State Highway Commission this week received bids for construction of the main bridge superstructure of a highway bridge at Memphis.

Work on the piers for the new bridge, which is planned to carry four lanes of traffic, is already under way. (*ENR* Oct. 25, vol. p. 547.)

Modjeski & Masters, of Harrisburg, Pa., are engineers for the structure.

New head for Region II of Reclamation Bureau

Richard L. Boke, land use specialist and native of California, has been appointed regional director of the Bureau of Reclamation, Region II, which includes the Central Valley Project, northern California and part of Oregon, with headquarters at Sacramento, Calif. He succeeds Charles E. Carey who died in September. Remaining in a high executive capacity is R. S. Calland, acting regional director since Mr. Carey's death.

For the last eight months Mr. Boke has been supervisor of operation and maintenance for Region II and has engaged in activities looking to the resumption of the CVP, in negotiations of CVP water-marketing contracts and other matters. Before the war he was assistant regional director in the Soil Conservation Service, his activities covering the states of Arizona, Colorado, New Mexico and Utah. Mr. Boke was formerly connected with the Foreign Economic Administration.

A 9,500,000 cu. yd. excavation for W. Va. airport

Grading work is now in full swing at Charleston, W. Va., on a new airport that will require about 9,500,000 cu. yd. of excavation and about an equal amount of fill. Four miles northeast of the city in the mountains, the airport is only a few minutes drive from downtown Charleston. The state is realigning and widening existing highways to the site and a long access road is being constructed up the mountain to the site.

When completed the field will provide three runways varying in length from 4,750 to 5,800 ft. each with a 150-ft. paved width and overall "landable" width of 500 ft.

In the immediate foreground is shown the 85-ft. high fill at the southwest end of the NE-SW runway. Farther to the left are the contractor's offices and shops, and just beyond the 210-ft. high fill is taking shape.

The field will be operated by Kanawha County, represented by Fred Alley, airport director. The county floated a $3,000,000 bond issue and the Civil Aeronautics Administration provided $2,750,000.

Harrison Construction Co., Pittsburgh, Pa., R. Truzzie project superintendent, is the grading contractor. Whitman, Requardt and Associates, Baltimore, Md., are consultants and prepared the master plans.

About half of the grading and the entire drainage, paving and lighting is being done with the CAA funds. The Airways Engineering Division of the Bureau of Federal Airways is in charge of the design and construction of this portion. William Hawkins is resident engineer for the CAA.

Sewage works federation directors elect Dr. Hoskins to head association

Substituting for annual convention, business meeting of federation elects officers and selects award recipients

. K. Hoskins, assistant surgeon gen- of the U. S. Public Health Service, s elected president of the Federation Sewage Works Associations at a eting of the organization's board of ntrol, held in Chicago on Oct. 17-18, minutes of which have just been eased.

At this directors' meeting, which was ld in lieu of an annual convention, was decided to hold the next conven- n of the association at Toronto, nada, the tentative dates being Oct. 9, 1946.

Other officers elected at the board eting were Francis S. Friel, consult- g engineer, Pittsburgh, vice president; d W. W. DeBerard, city engineer, icago, treasurer. Harold F. Gray, of rkeley, Calif., was elected to serve as director at large for a three-year term. W. H. Wisely was reappointed to rve as executive secretary and editor the association, and F. W. Mohl- an, director of laboratories, Sanitary istrict of Chicago, reappointed to rve as advisory editor.

Awards are made

Elected to honorary membership was Willem Rudolfs, chief of the divi- on of water and sewage research, ew Jersey Agricultural Experiment tation, who becomes the eighth mem- er of the federation to receive this istinction.

Lloyd R. Setter, of the division of ewage disposal, New York City Depart- ent of Public Works, received the Har- ison Prescott Eddy award for out- tanding research in connection with his ork on modified sewage aeration, hich is practiced at some of the New ork City treatment plants.

For the successful solution of an im- portant and complicated operational roblem, John D. McDonald, of Spring- eld, Mass., received the George Brad- ey Gascoigne award. Mr. McDonald's ork was described in an article in the *Sewage Works Journal*, entitled "Sludge Disposal Experiences at Spring- eld, Mass."

Harold W. Streeter, Cincinnati, Ohio, received the Charles Alvin Emer- on award in recognition of his valuable researches in the fundamental princi- ples of the natural purification of pol- luted streams.

The Kenneth Allen awards, for "out- standing service in the sewerage and sewage treatment works fields as related particularly to the activity of member associations", were granted to the fol- lowing: Joe Williamson, Jr., (Florida Sewage Works Association); Murray Alderson Wilson (Kansas Water and Sewage Works Association); George S. Russell (Missouri Water and Sewerage Conference); Frederick Holman War- ing (Ohio Sewage Works Conference); Howard Eugene Moses (Pennsylvania Sewage Works Association); Dario Travaini (Arizona Sewage and Water Works Association).

National legislation approved

W. H. Wisely, executive secretary of the federation, reported that the com- bined active and corporate membership totaled 3,216 on Sept. 30. This repre- sented a gain of 228 members, or 7.6 percent during the year.

Because of its potential beneficial ef- fect in the elimination of industrial stream pollution, the board acted to approve in principle the Bailey bill (H. R. 3972), which would allow an industry to deduct the cost of waste treatment works in the computation of net income for tax purposes.

The board also reaffirmed a resolu- tion endorsing the recently amended draft of the Spence bill (H. R. 4070) to provide for the curtailment of stream pollution.

Helps public to see pier job

Carrying into practice some of the principles of good public re- lations, Senior & Palmer, Inc., New York contractors are mak- ing it easy, interesting and in- structive for the public to watch the compressed air pier job they have under way for a new lift bridge across the Passaic River in Newark, N. J.

Borrowing a name and an idea from the popular Sidewalk Super- intendents Clubs, the contractor has inaugurated a "Riverside Superintendents Club", for which an observation post has been erected. Inasmuch as a good deal of the work on a com- pressed air job is not visible from the surface, Senior & Palmer have made available a little booklet describing the bridge and the method being used to construct the foundations, giving also the state highway department's and contractor's personnel and listing the subcontractors, manufactur- ers and material suppliers.

New hydroelectric plant at Shoshone Dam

A 25,000-kw. hydroelectric plant, cost- ing about $900,000, will be constructed by the Bureau of Reclamation 3 mi. downstream from Shoshone Dam in northern Wyoming, Commissioner of Reclamation Harry W. Bashore has an- nounced. The project, known as the Heart Mountain power development, was authorized Sept. 5 and construc- tion will begin when funds are made available.

Discovery of new oil fields in the Elk Basin area, north of the Shoshone project, has caused a shortage of power in the territory. "Drilling activities have greatly increased demands on the al- ready inadequate power supply," Com- missioner Bashore said.

It is estimated that the cost of con- structing the plant would be paid back at the end of 16 years of operation.

N. C. urges attention for secondary roads

In a strongly-worded statement, Gov- ernor Cherry of North Carolina last week urged the State Highway Com- mission to devote its immediate attention to state, county and secondary roads.

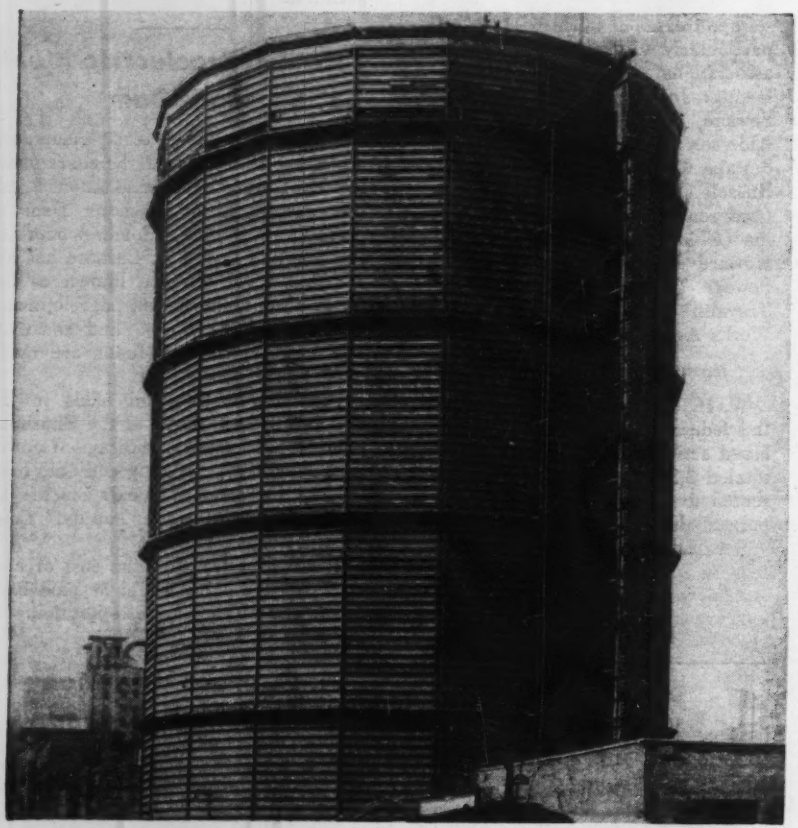
"Someone must spend his whole time on the handling of county and secondary roads," the governor told commissioners at Raleigh. "If it takes more money, we might as well make up our minds to pay it. You must make provision to increase what you are paying common labor—and if engineers and draftsmen are the bottleneck, pay them more too.

"I think the commission ought to adopt a policy of taking care of the county roads we now have and concen- trating its entire attention on putting these roads into passable condition. You must be more liberal in constru- ing your rule governing construction of roads for communities."

A. H. Graham, commission chairman, told the governor that his group is "determined not to insist on the high standards of engineering specifications of the past" on the secondary roads, and plans to employ a supervisor in each highway division to devote his en- tire attention to these roads.

Demolition of a Waterless Gas Tank

When a waterless gas tank, 174 ft. in diameter and 255 ft. high, located in midtown Manhattan, had to be removed to make way for the Peter Cooper Village housing project of the Metropolitan Life Insurance Co. (*ENR* Feb. 22, 1945, vol. p. 243), the procedure selected was to "float" the roof on compressed air while the upper sections of the walls were being removed. The steel members had to be cut loose with pneumatic tools, since fire hazard precluded flame cutting.



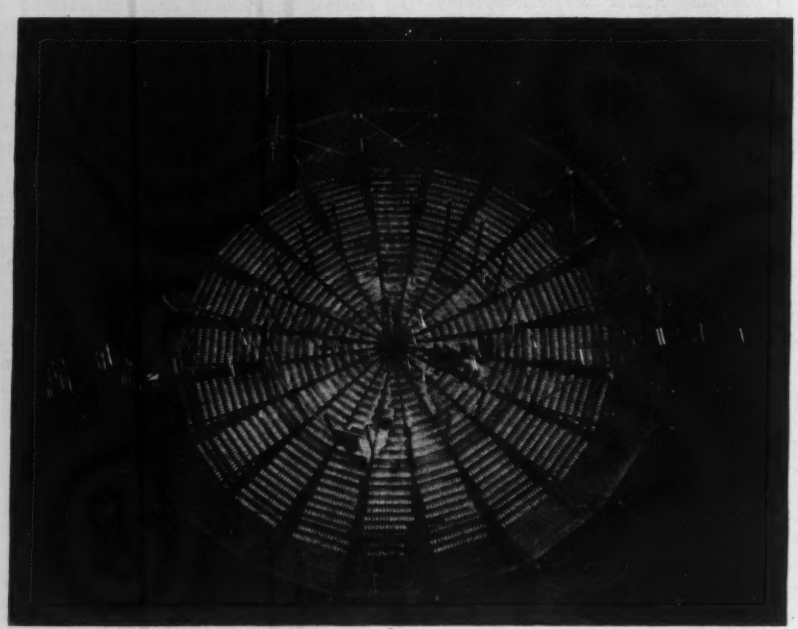
The unusual demolition process was made necessary by the fact that if the roof were removed, the unbraced walls would be laterally unstable. Consequently, it was decided to utilize the bracing function of the roof throughout the dismantling process.

The roof was to be supported on a 23,600-sq. ft. circular piston that had formerly been used to regulate the gas pressure inside the tank. For this purpose, an outer diagonally braced ring and inner ring of 20 columns each with a central tower were provided on the top surface of the piston.

With air pressure maintained at 6 in. of water, the piston was raised to roof level to support the 300-ton truss, after which the pressure was increased to 12.5 in., the roof cut loose from the walls and the piston "floated" down 16 ft. 6½ in. to rest on previously prepared brackets. The pretruded section of the wall was then removed. After the first lowering of the piston, each of the following decrements were 16 ft. 3 in. and took about 40 min. It was estimated that the truss was composed of 2,000 tons of steel.

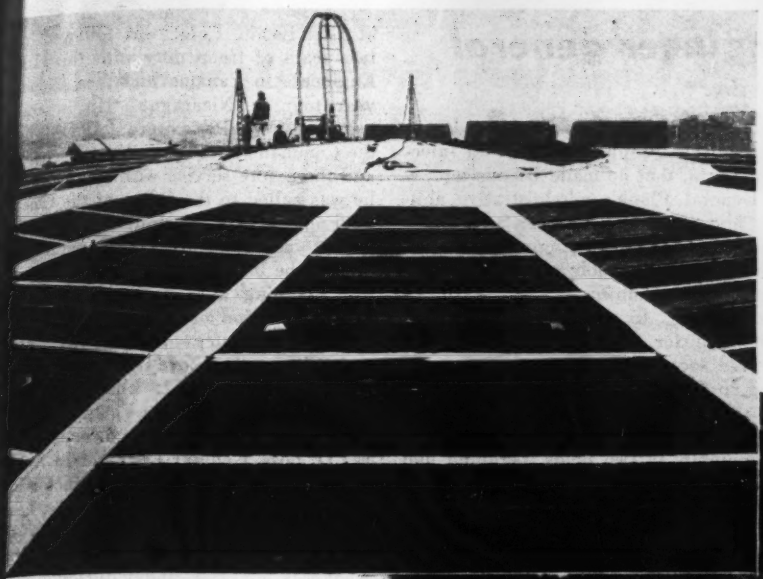
Air was supplied by two compressors operating in multiple, providing 39,000 cfm. under a head of 6 in. of water. Previous to the application of air, the tank was purged with an inert gas.

Demolition was performed by Lipe Steel Products Co., Jamestown, N. Y., for whom W. H. Hoffman, was field engineer. Charles J. Smith was field engineer for Consolidated Edison Co., New York City, owners of the tank, which will now deliver gas from their Astoria plant to the area formerly served by this tank.

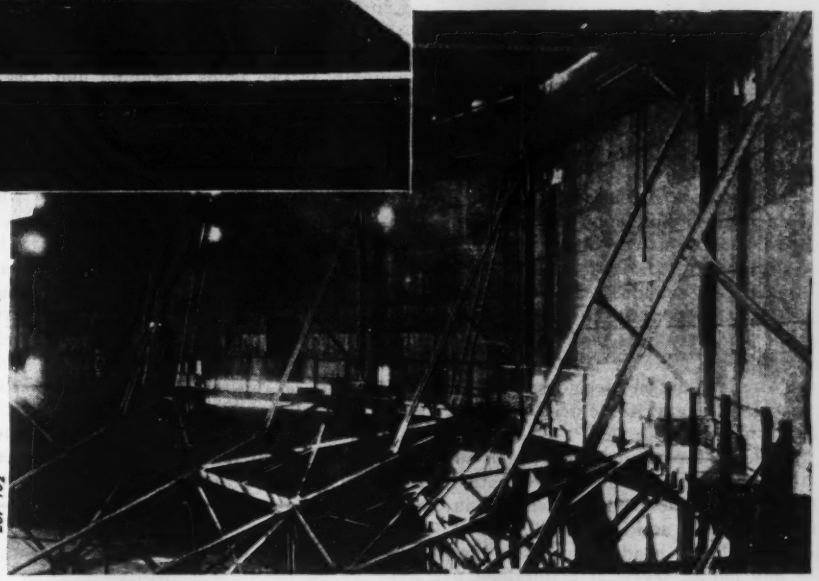


Roof of waterless gas tank (above) in midtown Manhattan was utilized during dismantling operations to provide lateral stability. Elevator at right provided access to inspection platforms.

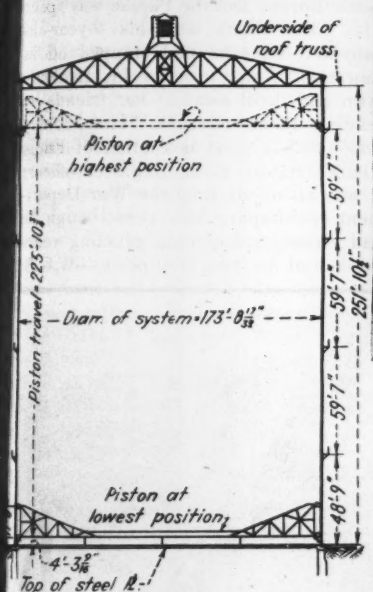
As seen from roof, piston in lowest position carries temporary structural steel to support roof trusses. White spots on piston, which formerly regulated gas pressure, mark positions that had been occupied by about 200 tons of concrete block ballast.



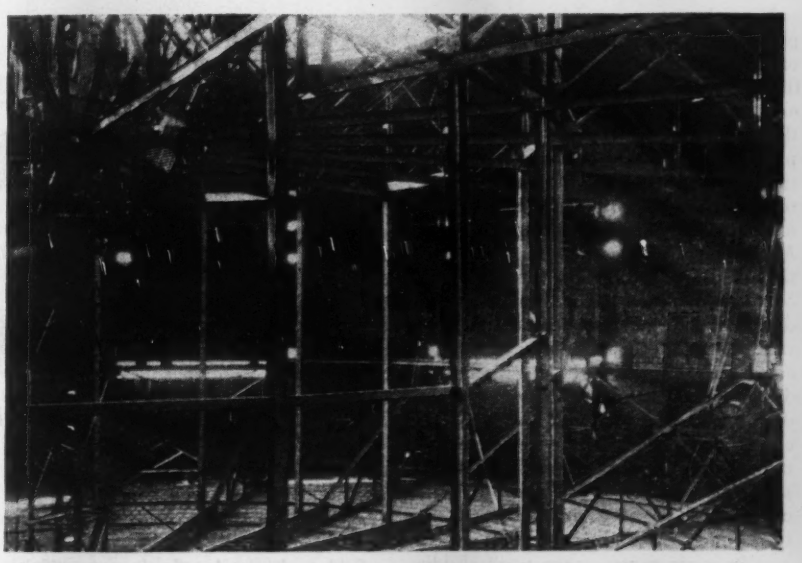
To provide air and light for the interior of the tank, roof sheets were removed in an early operation. Tank was purged with an inert gas.



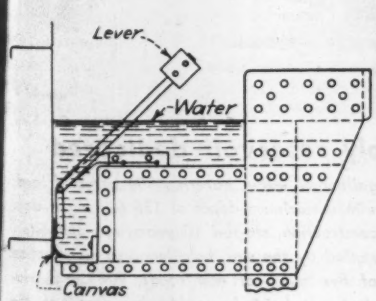
With piston raised by air pressure, outer ring of diagonally braced columns support roof trusses, which will be lowered in about 16-ft. increments to brackets on wall columns.



Typical section through tank indicates range of movement of piston, from highest position for full tank to bottom.



Central tower and inner ring of columns help carry the roof during lowering operations. Trusses weigh about 300 tons.



Detail of tar seal—water and lever hold canvas strip against tank wall.

Ewart G. Plank, Engineer general

(*Continued from page* 5)

sion. Made up of units from the Engineers, Signal Corps, Quartermaster, Medical, Transportation, Ordnance and all other service branches, that organization mounted the invasion, accompanied it to the beaches of Normandy and became in all respects the "Advance Section", a name and a character it kept throughout the campaign. For when the Armies moved, so did Adsec, leaving rear echelon construction and supply to other Com. Z. sections, which, unlike Adsec, had geographical limitations.

Adsec established most of the static installations required by the Armies, rebuilt the railroads and roads as it went along, even operated the truck haul lines such as the famous Red Ball Highway. It designed and constructed all of the rail bridges, including the Rhine crossings, and it built supply depots and hospitals to the extent that its mobile existence permitted. Between June and November, its headquarters moved five times, always operating in an area just behind the battle lines that was seldom more than 25 miles deep, but as much as 125 miles long north and south. At its peak strength it included 190,000 officers and men.

Obviously, the commander of such an outfit needed uncommon administrative ability, military acumen and the stamina of a foot soldier, and General Plank had them all. If his headquarters saw him one day out of seven, it maintained a good average. By jeep and airplane he visited every part of his command and much of the Army area as well on continuous schedule.

Never letting up on his own physical punishment, he required equal devotion on the part of his subordinates. Although not strictly a spit-and-polish general, he nevertheless believed firmly in the discipline engendered by military procedures. At one headquarters location he made his subordinates live in tents, just like the Armies had to do, even though buildings were available. At the one good headquarters setup that they had—in a Belgian army post at Namur—everyone free from pressing duties had to stand retreat on the parade ground every evening while the colors were lowered. He had his immediate subordinates live with him, so that discussions and planning could go on continuously, and to be at "the general's table" when things were popping was a breathtaking treat for a visitor. The orders that he gave were definite, detailed and incisive. A commanding general in every sense of the word, Eddie Plank influenced people without doubt, but he went at the business of war with such youthful enthusiasm, good sense and fairness, topped off with an infectious grin, that he made friends too.

General Plank's administrative ability first came to light when as military assistant, Fort Peck Engineer District, he was given the job as town manager and became known as the "Mayor of Fort Peck". In charge of the land acquisition for this great dam, he also served successively as chief of the tunnel and of the spillway sections. Prior to this assignment, General Plank's Corps of Engineers experience had been principally in two fields, mapping and with troops, although, as an outgrowth of an aerial mapping assignment in 1922-24, he temporarily transferred to the Air Corps and got his pilot's wings.

General Plank grew up in Lawrence, Kansas, where he attended the University of Kansas for two years before being called to duty in 1916 as a private in the Kansas National Guard, later being mustered into the federal service, 137th Infantry, from which he was honorably discharged to enter West Point. Two of his early assignments after graduation were as head of the Rainy Lake mapping project and of field operations in the Duluth District. Brief service with the 2nd Engineers at Fort Logan, Colo., was followed by two years of troop duty with the 11th Engineers in Panama and then a one-year tour in Nicaragua. His several years at Fort Peck were followed by the Command and General Staff School, and then more service with troops until he was called to the Office of the Chief of Engineers in Washington in 1940, where, as chief of the operations branch, he headed the airfield construction planning work during the era of great expansion of such facilities.

Two red-letter assignments are omitted from the above list—in October, 1930, being placed in charge of the mapping program of the Vicksburg District, where he first served under his E.T.O. boss, General Lee, and in August, 1931, being made an instructor in the New Mexico National Guard at Las Cruces, where he met his future wife. It was in this southwestern city that what was left of a 30-day furlough between Europe and the Pacific was spent with Mrs. Plank and his 9-year-old daughter, after he had stopped off in Lawrence, Kan., to mow his mother's lawn and thrill some of her friends by sending them corsages. That 30-day furlough is a good indication of Eddie Plank's stature as an Engineer officer: it was all of the time the War Department could spare him, even though he had already spent three grueling years in one of its toughest posts.—W.G.B.

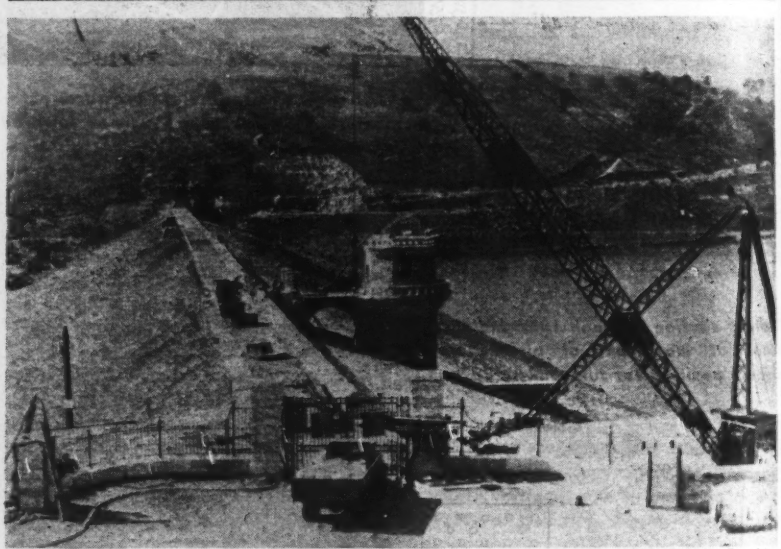


Photo by British Combine

Largest British water-supply reservoir dedicated

The new Ladybower Dam, built by the Derwent Valley Water Board to serve Nottingham, Leicester and other Derbyshire (England) towns, was dedicated recently by King George VI.

Said to be by far the largest artificial reservoir within earthwork embankments in the British Isles, it will store 6,300,000,000 gallons of water, covering 504 acres of land, with a maximum depth of 135 feet. The dam construction, started 10 years ago and interrupted by the war, entailed also construction of five miles of new roads, two large viaducts, and 54 houses for residents of the submerged villages of Ashopton and Derwent, whose sites the lake covers.

A.I.S.C. enlarges engineering staff, sees rise in structural steel demand

Institute's district engineers increased to ten—Plans made to re-edit design manual—Bookings of over 2 million tons expected

Anticipating increases in annual fabricated structural steel bookings that will raise this year's total of about 0,000 tons to 1,600,000 tons next year nd to a 2,500,000 ton average for the llowing four years, the American Institute of Steel Construction is embarking upon a greatly enlarged promotional rogram.

As announced at the institute's 23rd nnual convention last week at French ck Springs, Ind., principal emphasis ill be placed on increasing the engineering staff and its activities. What entailed was outlined in reports of wo of the engineer department officers, . R. Higgins, director of engineering, nd F. H. Frankland, consultant.

At the time of the last convention, he institute's corps of district engineers ad been reduced to five as a result of he war, but Mr. Higgins reported that he number is now up to ten, and that xpansion will continue as properly ualified men become available. Effective immediately, Mr. Higgins announced, Lt. Col. Jack Singleton, former institute district engineer at Topeka, Kan., and during the war in harge of military bridging in the Office f the Chief of Engineers, Washington, ill become chief engineer of the institute with offices in New York City (*ENR* Nov. 1, vol. p. 568). At the ame time the Topeka office will be eopened and placed in charge of eorge W. Lamb, at present bridge engineer of the Kansas State Highway Department. And as a third development or the near future, a new office covering Missouri and Arkansas will be established either in Memphis or St. Louis nder Mace H. Bell, formerly district ngineer at New Orleans, but now a ieutenant in the Navy's Bureau of Yards and Docks.

Added to these new members of the staff are three other district engineers who have joined the institute since the first of this year: R. M. Raffensberger at Greensboro, N. C., who was formerly chief structural engineer for William C. Olsen, consulting engineer of Raleigh, N. C., and before that with the Pennsylvania and Georgia highway departments; William L. Zeigler at Dallas, Texas, who was with Giffels & Vallet, industrial engineers of Detroit on the Norfolk naval operating base and with Robert & Co. of Atlanta on the Corpus Christi naval air station; and Walter T. Norris at San Francisco, who returns to his old post there after three years with the Navy's Bureau of Yards and Docks.

Engineering and research

Mr. Higgins, in his report, also revealed that a re-editing of the institute's widely used design manual will be undertaken just as soon as a final determination has been made of the postwar list of structural shapes. Other activities engaging the attention of the engineering staff are the preparation of load capacity tables for welded joints like those now published in the manual for riveted joints; an economic study of various types of framing as applied to six story apartment buildings; and the development of a pilot test program to explore the potentialities of vermiculite plaster as a fireproofing material for structural steel.

The institute contributes in funds and manpower to research carried on by other technical organizations, and Mr. Frankland in his report referred to a number of these activities. Welding Research Council, for example, has completed the first stage of an investigation of fatigue strength of fillet, plug and slot welds at the University of Illinois, and will soon begin the second stage, which will seek to relate the research findings to practical fabricating problems. At Columbia University the council is continuing the study of the impact strength of welded beams.

With respect to the work of the committee sponsored by the Public Roads Administration to investigate suspension bridges, F. Bleich, with offices at the institute's headquarters in New York, is working on problems presented by the subcommittees on model studies and analysis, and his report is now being arranged for publication by the PRA.

Finally, the institute has become a member of the new Column Research Council organized under the auspices of Engineering Foundation. It is the plan to undertake re-education in the field of metallic compression members and their design, where long neglect of national integrated research has created a bad condition in specification writing.

Institutes growing

The present membership of the institute among structural steel fabricators now numbers 174 firms, an increase of 15 since last year. Income from dues is $272,000 compared with a minimum received in 1933 of $103,000 and a maximum in 1930 of $386,000. About 59 percent of the dues comes from bridge and building tonnage, the remainder from miscellaneous types of steel construction.

Paul Coddington of the Lakeside Bridge & Steel Co., Milwaukee, Wis. was reelected president for the next year.

Pennsylvania contracts for highway engineering

Following a practice inaugurated late in 1943 in order to speed the preparation of its highway plans (*ENR* Dec. 2, 1943, vol. p. 792), the Pennsylvania Department of Highways has awarded another contract for the engineering work on one of its major projects. The new contract is for surveys, designs, specifications and contacts for 15 miles of 4-lane superhighway, on a proposed branch from the Pennsylvania Turnpike, starting near Greensburg and extending in a westerly direction to the National Pike at Washington, Pa. The engineering contract was awarded to Gannett, Fleming, Corddry and Carpenter of Harrisburg, which firm has just completed similar work on the remaining 25 miles of the proposed superhighway. The proposed highway will provide a route whereby traffic using the Pennsylvania Turnpike can avoid the congestion in the metropolitan district around Pittsburgh.

Oregon county wants to build its own roads

Multnomah County, Ore., comprised chiefly of the city of Portland, wants to go into the highway building business.

The county commissioners, in a letter to the State Highway Commission, asked that the county be permitted to bid as contractors on county construction jobs, carrying out contracts under highway commission specifications and supervision just the same as any private contractor.

The incentive back of the proposal is that, should the county take over road work under contract with the state, it could be done largely by force account, thus aiding the county in handling unemployment.

The highway commission expressed affirmative interest in the plan and referred the proposal to the chief of the Public Roads Administration for his study and recommendation, this because some of the county road work is classified as joint federal and state work.

Mexico City builds $10 million sport city

World's biggest bull ring, huge football field, other structures, scheduled to be finished this year

A $10,000,000 "sports city" that will combine facilities of Madison Square Garden, Pasadena's Rose Bowl, Madrid's Bull Ring and other famous sports centers, is now under construction in Mexico City, capital of Mexico.

Financed by a group of Mexican industrialists, the "sports city" will compose six blocks of buildings and playing fields in the heart of the capital. The development will include what is said to be the largest bull ring in the world—seating 47,000 persons—and arenas for boxing, wrestling, basketball, jai-alai. Artificial beaches, a midway, movie theater, and restaurants will be included.

First unit to be completed will be the bull ring, already under construction. Of unique construction, the arena will extend 65.5 ft. below street level and the same distance above street level to accomplish the dual purpose of easy crowd handling and providing participants in the bull fights protection against strong winds. Earth in the center of the arena has been hollowed out to accommodate the huge bowl, leaving side walls of soil standing to support the seats, ramps, and the superstructure, which is of concrete.

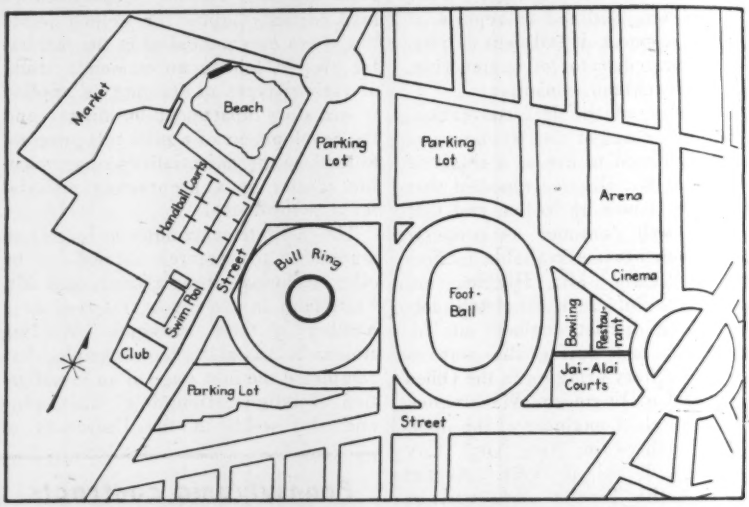
Access will be provided through ramps starting at the main entrance and dropping to the lower section and other ramps that will carry spectator traffic to the higher levels of the arena. At the substreet level, stables for horses and corrals for the bulls and other animals used in the shows are being built. These stables and corrals are so placed that the animals can enter directly into the arena through eight special tunnels.

The football stadium, to seat 50,000 persons, is also designed with the purpose of dividing the grandstands into sublevel and above level seats. Excavation for the stadium will extend 52.5 ft. below street level, and the superstructure will rise 40 ft. The stadium will provide a playing field 230x340 ft.

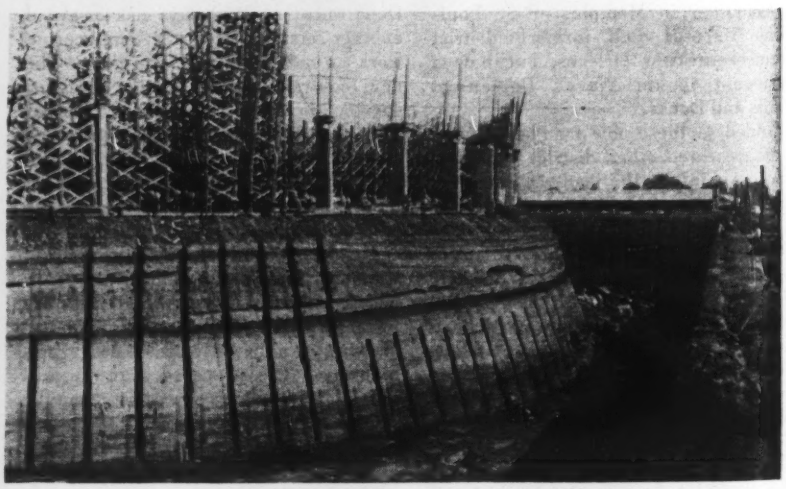
The boxing arena is planned for a capacity of 20,000. One of the swimming pools will be of Olympic dimensions, and another will have artificial ocean waves. Bowling alleys containing 40 alleys, an ice ring, and a 5,000-seat movie theater are included.

With the exception of a few technical experts, all workers on the project are Mexican and all construction work is being done by Mexican contractors. Approximately 1200 men are now employed.

Above: Earth has been scooped out to form bowl of bull ring, and seats are being placed directly on it. Seats appear to be precast units.



Above: General plan of the $10 million sports city. Bull ring and football stadium are already under construction, other work will follow soon. Below: Outer face of bull ring grandstand, with central core left standing after excavation at sides to accommodate stables, loading ramps and utilities. Core will be faced with reinforced concrete, keyed to the slots shown.



Major irrigation scheme for Arizona made subject of U.S.B.R. report

Tentative findings of U. S. Bureau of Reclamation eliminate the Marble Canyon scheme with its unprecedented tunnel

A preliminary report on three schemes for bringing Colorado River water to central Arizona has been submitted to the governors and legislatures of the Colorado basin states by E. A. Moritz, director, Region 3, U. S. Bureau of Reclamation. After review and comment by the states, a final report with definite recommendations will be submitted to Congress by the bureau.

Under the Colorado River Compact, Arizona is entitled to take 2,800,000 acre-ft. from the Colorado River annually. Much of this water can be used to best advantage in the upper part of the Gila River basin to supplement the rapidly declining supply of existing irrigation projects and for new projects. Three schemes for doing this have been under consideration for many years (*ENR* May 24, 1945, vol. p. 142). Briefly, they are as follows:

1. *Marble Canyon Route*—A gravity-flow project under which water diverted from the Colorado by a high dam above Grand Canyon would be carried through 139 miles of tunnels to the upper Verde River valley (in the Gila basin), from whence it would flow through power plants to the irrigation projects around Phoenix. (Summaries of the U.S.B.R. report indicate that modifications of this scheme were considered).

2. *Bridge Canyon Route*—Also a gravity project under which water would be diverted by a high dam at the upper end of Lake Mead through a 72-mile tunnel, canals and a regulating reservoir, to central Arizona.

3. *Parker Route*—Water from the reservoir behind Parker Dam (below Boulder and Davis dams) would be pumped a vertical distance of 1,040 ft. into the same regulatory reservoir as proposed for the Bridge Canyon route, from whence it would flow by gravity to the irrigated areas.

Marble Canyon eliminated

The engineers of the bureau can see no profit in the Marble Canyon Route, hence they recommend its elimination. This is noteworthy because the Senate Committee on Irrigation and Reclamation in July of this year (*ENR* Aug. 2, vol. p. 131) went on record as favoring this route. That committee stated, however, that additional engineering studies were needed.

Estimates of the cost in the preliminary report of the Bureau of Reclamation were based on diversion of 1,000,000 acre-ft. and 2,000,000 acre-ft. and on various provisions for repayment and for charging part of the cost to flood control.

Including the dams on the Colorado River, the cost of the three projects for the full diversion of 2,000,000 acre-ft. were estimated as follows: Marble Canyon, $1,388,635,000; Bridge Canyon, $1,310,625,000; Parker, $1,107,436,000. Construction of a 673-ft. dam in Bridge Canyon is included in the estimates for the Parker pumping project, presumably to supply power for the pumping.

Calendar of Meetings

NATIONAL

Federation of Architects, Engineers, Chemists and Technicians, C.I.O., 8th national convention, Hotel Empire, New York, N. Y., Dec. 7-9.

REGIONAL

Association of Western State Engineers, 18th annual meeting, Shirley-Savoy Hotel, Denver, Colo., Nov. 12-13.

Carolinas Branch, Associated General Contractors of America, Inc., annual convention, Southern Pines, N. C., Nov. 19-20.

Southeastern Association of State Highway Officials, Atlanta Biltmore Hotel, Atlanta, Ga., Dec. 3-4.

Black Top Roads Association, Abraham Lincoln Hotel, Springfield, Ill., Dec. 5.

Illinois Water Plant Operators, Leland Hotel, Springfield, Ill., Dec. 5-6.

South Dakota Water and Sewage Works Conference, Lawlor Hotel, Mitchell, S. D., Dec. 6-7.

Southern Michigan County Road Commissions, annual meeting, St. Joseph, Mich., Dec. 4-5.

Carolina Road Builders Association, annual meeting, Pine Needles Hotel, Southern Pines, N. C., Dec. 7-8.

American Water Works Assn.:

Wisconsin Section, Pfister Hotel, Milwaukee, Wis., Nov. 13-15.

Florida Section, MacFadden Deauville Hotel, Miami Beach, Fla., Nov. 15-17.

Four States Section, Lord Baltimore Hotel, Baltimore, Md., Dec. 13-15.

Quebec plans new dam on Upper Ottawa River

The capacity of a hydro plant on the upper Ottawa River—the first built and owned by the Quebec Government—will be substantially increased by the construction of a new storage dam on Lake Dozois, near Grand Lake Victoria. Premier Duplessis of Quebec said that construction of the new dam will increase power available to mining companies and electrical cooperative societies in the Lake Dozois region. Construction of the new dam will also entail installation of transmission lines for power distribution. The main plant, operated by the Abitibi-Temiscamingue Hydro-Electric Commission, now operates on 25 cycles, because of the 25-cycle service available in the adjacent part of Ontario, although practically all the rest of Quebec is served by 60-cycle current.

Propose Vermont dam

The Water and Light Commissioners of Morrisville, Vt., have filed an application with the State Public Service Commission for permission to construct a 96-ft. concrete arch type dam on the Green River. The structure would be 410 ft. long and impound 17,300 acre-ft. of water. About 625 acres will be flooded. The dam is to provide additional storage capacity for the Morrisville hydro-electric plant and other utilities.

Major sewer program for Puerto Rico

About $6,294,000 will be invested in new sanitary sewer systems and enlargement of existing facilities in Puerto Rico during the next six years, according to a program submitted to the island's planning board.

All municipalities on the island, including rural areas, are to be provided with adequate facilities.

To finance the project, the insular government plans a bond issue, and utilization of Treasury trust funds which will provide about $3,000,000. The program is the second largest contribution of the Puerto Rican government toward improving health and sanitary conditions. Recently a $27,000,000 waterworks construction program was announced. (*ENR*, Oct. 11, p. 456.)

One of the important features of the new sewer construction program is that the investment is not expected to affect the borrowing capacity of the Insular Government, since revenues from the new services are expected to cover the bonded debt.

MEN AND JOBS

B. A. Poole has returned to his post as director of the Division of Environmental Sanitation of the Indiana State Board of Health, from which he took leave in 1942 to enter the Army. His Army activities included assignment as sanitary engineer at several camps, followed in May, 1944, by appointment as chief of the Water and Sewage Section, Repairs and Utilities Division, Office of the Chief of Engineers.

William H. Owen is now head of the field engineering and inspection department for the architect-engineer-manager firm for the Sunflower Ordnance Works at DeSoto, Kan.

Roy H. Beard, of Oxford, N. C., who has been connected with the North Carolina State Highway Department for 25 years, has been appointed road supervisor of Granville County, succeeding **Roger Jones,** resigned.

Floyd M. Delk, former Texas Highway Department senior resident engineer at Houston, has been raised from lieutenant to lieutenant commander of the 88th Naval Construction Battalion. He was officer in charge of building naval bases in Alaska and the Aleutians for 18 months. He is now stationed at New Orleans but expects to be discharged soon and re-enter engineering work in his home city.

Charles E. DeLeuw, a member of the consulting engineer firm of DeLeuw, Cather & Co., Chicago, Ill., has been appointed engineer of the Niagara Rapid Transit Commission, Buffalo, N. Y.

Lieut. Col. Harry W. Weest, of Altoona, Pa., now division surgeon of the 28th Division, will become the new Pennsylvania State Secretary of Health and chairman of the Sanitary Water Board, taking the place of the late Dr. A. H. Stewart.

W. B. Walraven has been promoted to full colonel. A graduate of the engineering school, University of Illinois, Col. Walraven spent 16 months overseas in the first world war, after which he entered the construction business in East St. Louis. He joined the Springfield Sanitary District, where he worked as chief engineer from 1928 until he reentered the Army as captain in 1942. In November, 1943, he was placed in command of the Eighth Engineering training group at Fort Leonard Wood, Mo., which post he still holds.

Capt. James W. Henry has been employed as engineer for the Nebraska State Department of Aeronautics. He was project engineer for the department from 1926 to 1942, when he entered the Army Engineering Corps. He was stationed in China, Burma and India for 30 months.

Gottlieb Neubarth has been appointed acting full time city engineer for Aberdeen, S. D., and **L. H. Doscher** was appointed assistant engineer. Mr. Neubarth was Brown County engineer and has previously served Brown County and Aberdeen jointly for a postwar engineering survey.

Herbert T. Barclay, for the past ten years city manager of Mason City, Iowa, and executive for the city in construction of the new million dollar airport, has been appointed industrial engineer for the Chamber of Commerce of Kansas City, Mo. From 1930 to 1935 he was an engineer with the Missouri State Highway Department.

M. C. Welborn, now special research engineer, will become district engineer for the Texas highway department in Dallas. He headed the department's staff in Yoakum and Fort Worth before undertaking his special research on concrete pavement.

R. E. Doonan, city engineer at Waverly, Iowa, for many years, has resigned.

L. H. Belk, city engineer at Bismarck, N. D., has resigned to enter construction work. He was formerly chief engineer and assistant director of operations for the Works Progress Administration in North Dakota.

H. R. Chapin has taken over the duties of Roseau County highway engineer at Roseau, Minn., succeeding **Merle Alley,** who served since Harry Payne resigned over a year ago. Mr. Alley plans to engage in the contracting business. Mr. Chapin, a graduate of the University of Minnesota engineering school, has served as an engineer with the state highway department.

Arthur L. Smith, formerly of Peoria, Ill., was promoted recently to technician fourth grade on orders from Maj. Gen. H. S. Aurand, commanding general, Services of Supply, China Theater. Before induction he was a civil engineer for the U. S. E. D. in Chicago.

Capt. Paul H. Rice, now assigned to the division engineer officer, Great Lakes division, Chicago, recently returned from China, where he was with the Burma Road Engineers as district engineer on the Tengchung Cutoff, a connection between the Burma and Ledo roads. Before his war service he was principal field engineer in connection with the grade separation work at Winnetka, Ill.

R. E. Riddle, St. Joseph, Mo., formerly designing engineer for the St. Joseph Structural Steel Co., has formed the Riddle Engineering Co. located at that city. He was with the U. S. Engi-

General BREHON B. SOMERVELL, Commanding General, Army Service Forces, congratulates Lt. Gen. EUGENE REYBOLD, former Chief of Engineers, after ceremonies at Fort Belvoir, Va. Gen. Somervell, who was recently awarded an Oak Leaf Cluster to the Distinguished Service Medal, awarded the same decoration to Gen. Reybold. At Gen. Reybold's left are Lt. Gen. LEVIN CAMPBELL, Chief of Ordnance, and Maj. Gen. W. N. PORTER, Chief of Chemical Warfare Service, who also got the award.

HARRY A. DICK, president of the Associated General Contractors of America, (left) listens to PAUL VERNON, president of the northwest branch of AGC. The two men were attending an AGC meeting at Boise, Idaho.

neers in the Tulsa, Okla., district for four years.

Capt. Clement F. Sculley, Jr., a civil engineer, and vice-president of the Clement F. Sculley Equipment Co., highway contractors at St. Paul, Minn. is now stationed at Mills Field, San Francisco, Calif.

The South Dakota State Highway Commission at Pierre, S. D., has established a resident engineer office at Yankton and assigned **S. W. Gentle** as resident engineer there. He has been with the commission for 20 years.

M. H. Bryant, Bloomfield, Iowa, has signed a 3-year contract as county engineer of Henry County with headquarters at Mt. Pleasant. He succeeds **C. E. Smith,** who resigned recently after serving 30 years. Mr. Bryant has been an engineer with Day & Zimmerman, Burlington, Iowa. Prior to that he was county engineer of Jefferson County.

Paul J. Mahoney, senior liaison engineer at the Glenn L. Martin-Nebraska Co. bomber assembly plant at Fort Crook, Neb., has been named county engineer of Pottawattamie County, Iowa, with headquarters at Council Bluffs. He succeeds **Darrel N. Blake,** who has resigned.

A new area office of the Omaha U.S.E.D. is being established at Bismarck, N. D. Lt. Col. **John W. Sibert, Jr.** will be the area engineer. Colonel Sibert, recently returned from 23 months in the European theater, where he was chief of the construction branch in the Engineer section of the Army Service Forces in North Africa, Italy and southern France. A graduate of the University of Georgia and Massachusetts Institute of Technology, he was formerly Pacific area engineer, Panama Canal Zone.

Ernest F. Tippetts, former engineer with the U. S. Engineer office, Jacksonville, Fla., left recently to join the Knappen Engineering Co. in New York City. Mr. Tippetts had served for 17 years with the Army Corps of Engineers and was connected with the Jacksonville district office for 3½ years. He had supervised about 80 military construction jobs. The $25,000,000 Lake Okeechobee levee and hurricane gate project was one of his earliest Army engineering jobs.

The Dallas Expressway project, part of a multi-million dollar improvement for Dallas and Fort Worth, Tex., will have **T. E. Huffman** as the resident representative of the Texas Highway Department, acting as engineer-manager. He has been district engineer for the department at Dallas, Beaumont and Lufkin and for a year served as chief of construction and design for the department.

Alfred D. Coons, present city engineer of Davis, Calif., has been appointed Pacific Grove's new manager, engineer and street superintendent, to succeed City Manager **Erwin Dames,** a civil engineer, who has been appointed planning technician for the Santa Clara County planning commission.

Otto R. Lunn is senior engineer, U. S. Army Engineers, Portland district, Oregon, and under **Col. Ralph A. Tudor,** Portland district engineer, has supervision of definite progress reports for the engineer district. Previously he was resident engineer under Capt. E. B. Keating, Public Works Officer on the U. S. Naval magazine at Bangor, near Bremerton, Wash., a project which involved over $20,000,000.

J. Weldon Weir, director of public works for Asheville, N. C., has been appointed a member of the Asheville-Hendersonville Airport Authority.

John G. Keller has returned to the Illinois Division of Highways as district maintenance engineer in Paris. At the time of his discharge, Keller was serving as lieutenant colonel with the Army's heavy artillery. He entered the service June 1, 1941.

The Florida State Road Department is installing a field office at Orlando, headed by Assistant Chief Engineer **E. C. Degarmo,** who will work with division engineers from four of the five state districts. His territory will embrace all eastern and southern Florida. It is planned that division engineers in Lake City, Deland, Fort Lauderdale and Bartow will deal directly with Degarmo and from there problems will be routed to Chief Engineer **J. H. Dowling,** at Tallahassee.

Lt. Comdr. Thomas L. Kennedy (CEC) USNR was recently transferred from the Navy Operating Base at Norfolk, Va., to Oahu, Hawaii, where he is public works officer in charge of maintenance of naval buildings, facilities and grounds.

ROBERT L. FLETCHER, engineer; RICHARD G. KIMBELL, technical director, and EVERETT LANK, engineer, discuss results of tests on metal timber connectors in their headquarters of the Lumber Industry Laboratory, Washington, D. C.

ENGINEERING SCHOOL NEWS

Course in city management at Maine—Safety engineering at N. Y. U.—Lehigh to give graduate work in structural mechanics

Prof. Ransom D. Landon has been appointed dean of the college of engineering, The University of Akron, Akron, Ohio, beginning Feb. 1, 1946.

Prof. R. D. Landon

Professor Landon, 41, was born in Geneseo, N. Y., and took his civil engineering and master of science degrees at the University of Cincinnati. He is now professor of civil engineering at Southern Methodist University, Dallas, Tex.

The present dean, Fred E. Ayer, will continue on the faculty until the time of his retirement in June, 1947.

Dr. William F. O'Connor has been appointed to the newly established post of Professor of Safety Engineering in the New York University college of engineering.

Dr. O'Connor is one of four professors from four engineering colleges (Georgia School of Technology, Illinois Institute of Technology, New York University, and University of California) chosen to cooperate in a national plan to introduce safety engineering to engineering students. While this will not be given as an individual subject, the fundamentals will be incorporated into various technical subjects in the present engineering courses to make future engineers safety conscious.

Pointing out the need for special training for municipal management, Governor Horace A. Hildreth of Maine announced the instituting at the University of Maine, Orono, of degree granting courses in the management of federal and municipal agencies. There will be two courses offered to candidates, one of four years in municipal management, and the other a five-year course in engineering and management.

Dr. Bruce G. Johnston has resumed his duties as associate director of the Fritz Laboratory at Lehigh University and also has been made professor of civil engineering. Dr. Johnston has been on leave of absence for the last three and a half years during which he served as engineer on war projects with the Johns Hopkins University department of allied physics. At the Fritz Engineering Laboratory Dr. Johnston will be in charge of cooperative industrial research projects in the structures and materials fields and will give graduate instruction in structural mechanics. The laboratory expects to expand its service in which it has cooperated with industries and industrial associations on research projects.

$8,000-a-year job goes begging

Philadelphia, Pa., is unable to fill the $8,000-a-year post of Chief of the Bureau of Water.

Public Works Director Martin J. McLaughlin said engineers approached to date have turned a deaf ear to the proposition, and that he has virtually exhausted his list of eligibles. He suggested that the salary is considerably below that offered for comparable jobs in cities of equal size, and added he would ask the city council to raise the salary permissible.

Canadian army to take over Alaska Highway

The Alaska Highway, between Dawson Creek and the Alaska border, will come under the control of the Canadian Army on April 1, 1946, being then transferred from the control of the U. S. Army, according to an announcement in the Canadian Parliament by Justice Minister St. Laurent.

This is in accord with the agreement that the highway should revert to Canada six months after the end of the war. However, it will remain a military highway, and there are no immediate plans for tourist or commercial use.

The airfields and facilities of the Northwest Staging Route will be taken over by the Royal Canadian Air Force from the U. S. Army Air Force on June 1, 1946. In both cases, it was indicated, control by the armed forces is a temporary arrangement.

The deepest mine shaft in North America, and one of the deepest in the world, has been put down at the Lake Shore Mine at Kirkland Lake in northern Ontario.

The No. 4 shaft of this mine has now been deepened to 6,884 ft. or 5,804 ft. below sea level. The last working level has been opened at 6,825 ft.

Preparations are almost complete for sinking a further 500 ft. to a depth of 7,384 feet.

JOBS OF THE WEEK

PLANT, Nutley, N. J.

The Federal Telephone and Radio Corp., Newark, N. J., awarded a contract for a manufacturing plant to Turner Construction Co., New York, N. Y. The estimated cost is $4,000,000. Giffels & Vallet, Inc., Detroit, Mich., are the engineers and architects.

ROADS, Mexico

Department Public Works, Mexico City, will construct with its own forces additional roads, including Las Cruces section of Inter American Highway. The estimated cost is $2,000,000.

OFFICE, Wilmington, Del.

Turner Construction Co., Philadelphia, Pa., will construct an office building annex for E. I. du Pont de-Nemours & Co., Wilmington, Del., at about $3,000,000. Voorhees, Walker, Foley & Smith, New York, N. Y., are the architects. Jaros, Baum & Bolles, New York, are the engineers.

FACTORY, Avon Lake, Ohio

Collins Construction Co., Kansas City, Mo., has been awarded a contract for a factory, office and service building by Fruehauf Trailer Corp., Cleveland, Ohio. The estimated cost is $3,000,000. J. Gordon Turnbull, Inc., Cleveland, Ohio, is the engineer.

VISCOSE RAYON PLANT, Cairo, Egypt

Oscar Kohorn & Co., Ltd., New York, N. Y., has been awarded the design and construction of a viscose rayon plant, including power plant, by Rayon S. A. of Egypt. The estimated cost is $5,500,000.

Note—Additional bidding and contract news on many projects large and small, including the above items, appear in the Construction News section beginning on page 18.

OBITUARY

Prof. Lester Chipman McCandliss, 59, head of the department of civil engineering at the University of Pittsburgh, died Oct. 31. Mr. McCandliss was graduated from Purdue in 1909 and joined the Pittsburgh faculty three years later. In 1916 he supervised the erection of a camp for student engineers at Windber, Pa., and was later in charge there. He was commissioned a captain with the 15th U. S. Engineers at the start of the first World War, and in that capacity claimed to have led the first company of American soldiers that landed in England. During the recent war he supervised the training of many thousands of civilian war workers in civil engineering.

Philip W. Taylor, 57, died at New Ipswich, N. H., on Oct. 21. A graduate of Massachusetts Institute of Technology, 1910, Mr. Taylor was employed with the Fitchburg, Mass., Sewage Disposal Commission from 1911 to 1916. From 1916 to 1926 he was engineer for Lockwood-Greene Co., Boston, and from 1928 to 1941 was with Metcalf & Eddy, consulting engineers, Boston, after which he entered the manufacturing field.

James Arthur Collins, 59, president of Coast Constructions Ltd., Vancouver, B. C., died Oct. 25. During the war Mr. Collins handled more than $20,000,000 of war construction contracts.

James W. Dye, 58, for several years associated with the engineers of the U. S. Engineer Department on Ohio River work, died in Columbus, Ohio, Oct. 23.

Henry F. Burgner, 80, a retired chief engineer for the B. F. Goodrich Co., died in Akron, Ohio, Oct. 26. He had been identified with Goodrich for 33 years.

Harvey M. Merriman, 58, civil engineer, White Plains, N. Y., died Oct. 24. He was a graduate of Clarkson Institute, Potsdam, N. Y., and from 1911 to 1922 he was connected with the New York State Highway Department, and since then he had been employed by various cement companies.

Claude E. Fitch, 72, retired consulting engineer, Chicago, died Oct. 26 in Wilmette, Illinois. He was a graduate of the U. S. Naval Academy, 1893, and served in the Spanish-American war and in World War I.

John P. Keeley, 78, president of the Keeley Construction Co., Clarksburg, W. Va., died Oct. 17. He was regarded as the dean of West Virginia contractors and constructors. He was construction superintendent for the many enterprises of the late Henry Gassaway Davis, including 275 miles of railroad, and nine of the twelve tunnels of the West Virginia Central and Coal and Coke Railroad.

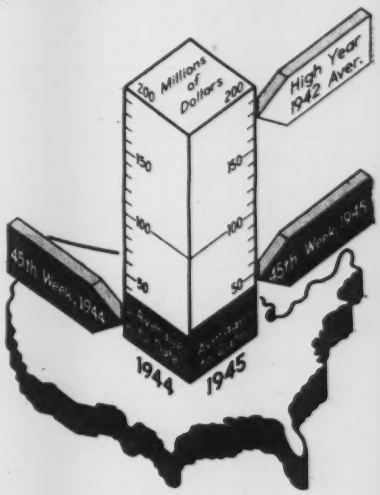
William J. Tobin, 75, contractor, died in Oakland, Calif., Oct. 17. He had been active in San Francisco Bay building construction work for the last 46 years.

E. E. Carpenter, 72, prominent Pacific Coast engineer, died Oct. 26, at Vancouver, B. C. A graduate of Stanford University in 1896, Mr. Carpenter was employed for several years on railway location in the Western states and in Mexico. Later, while associated with the engineering firm of Sanderson and Porter, he was in charge of the pioneering hydroelectric development on the Stanilaus River in California and work at Vancouver Island, British Columbia. From 1913 to 1915 he was chief civil engineer on the construction of the Panama-Pacific International Exposition in San Francisco. As a partner in the firm of Baker, Carpenter and Waters, he was engaged on the design and construction of the Stanford University stadium and of the University of California stadium. From 1923 until his retirement two years ago, Mr. Carpenter was consulting engineer with the British Columbia Electric Railway Co., Ltd., designing and constructing hydroelectric and steam projects.

Lt. Col. Herbert R. Pierce, 45, died in Washington, D. C., Oct. 30 as the result of an illness contracted in China. Born in Washington, Colonel Pierce was a 1917 graduate of West Point. After serving in the Philippines, he resigned in 1923 and took a degree in civil engineering at the Massachusetts Institute of Technology. He spent 15 years as a civil engineer in Central and South America, supervising construction of highways, railways and pipelines. Before World War II he was associated with the Army Engineers in construction of military defenses in the Canal Zone. Returning to active duty as a captain in the field artillery, he served for two years in the China Theater where he was awarded the Bronze Star. Later he served as combat liaison officer with the Chinese Combat Command and was awarded the special Breast Order of Yun Hui.

Frank C. Walker, 72, veteran deputy county engineer of Hamilton County, died in Cincinnati, Ohio, October 30.

CONSTRUCTION ACTIVITY



As Reported This Week to... *Engineering News-Record*

CONTRACT VOLUME

Continental U. S. Only
(Thousands of Dollars)

	Week of Nov. 8 1945	Cumulative 1945 (45 wk.)	Cumulative 1944 (45 wk.)
Federal	$3,533	$708,167	$1,006,936
State & Mun..	11,843	323,311	219,738
Total Public..	$15,376	$1,031,478	$1,226,674
Total Private.	30,452	837,838	321,280
U. S. Total...	**$45,828**	**$1,869,316**	**$1,547,954**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Type of Work	Dollar Volume (Thousands) This Week	Cumulative 1945 (45 wk.)	Cumulative 1944 (45 wk.)
Waterworks	$971	$50,819	$28,164
Sewerage	263	29,630	27,845
Bridges	1,876	38,069	14,479
Highways	4,857	196,478	177,253
Earthwork, Waterways	993	47,996	61,469
Buildings, Public.	3,171	435,609	585,701
Industrial	18,031	476,281	153,137
Commercial ...	7,815	257,954	122,862
Unclassified	7,851	335,821	377,053

NOTE: Minimum size projects included are: Waterworks and waterway projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1945 (45 wk.)	Cumulative 1944 (45 wk.)
NON-FEDERAL	$669,033	$411,995
Corporate Securities.	170,596	101,120
State and Municipal.	339,028	165,935
RFC Loans	24,600	61,940
REA Loans	60,009	20,000
Fed. Aid Highway...	79,000	63,000
FEDERAL	1,049,898	1,263,800
Total Capital	$1,723,122	$1,675,795

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost..	Nov. '45	309.28	148.67
Building Cost.....	Nov. '45	240.55	130.00
Volume	Oct. '45	167	73

CONSTRUCTION REPORTS

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.
ELSIE EAVES, Manager *DARWIN R. DAY, Statistics* *J. A. MAHONEY, Reports*
(Daily service also available—Write for details)

WATER SUPPLY

BIDS ASKED

Bids Asked November 15

★**O., Lima**—City, City Hall, WW reservoir, incl. inlet and outlet structures. $500,000. Plans deposit $10. Jones & Henry, Toledo Trust Bldg., Toledo, engrs. CD 10/5—ENR 10/11.

Tex., McKinney—City, c/o mayor, City Hall, WW imprvs., incl. 200,000 gal. concrete reservoir, brick, pump house and pipe work. Plans deposit $5. Koch & Fowler, 701 Great National Life Bldg., Dallas, engrs.

Bids Asked November 20

Tex., Lufkin—City, D. Hawkins, secy., City Hall, approx. 7,800 lin. ft. 12 in. c.i. water line, incl. valves, fillings, etc., from city pump. plant to elevated water tank.

Bids Asked November 21

N. Y., West Haverstraw—Bureau Contr. & Accounts, State Office Bldg., Albany, altering pump house.

LOW BIDDERS

Mass., Peabody—City, M. P. Doyle, City Hall, reservoir, Spring Pond, from J. H. Robbins, 95 Range Ave., Contrs. (1) $23,555, (2) $20,593, (3) $3,750.

N. Y., Owasco—Village, Village Hall, Oct. 22, water supply sys., filtration plant, Parts 1 and 3, from Tuller Constr. Co., P. O. Box 431, Red Bank, N. J., $18,000 and $59,600 respectively *** Parts 2 and 6, from Wm. E. Bouley & Co., Auburn, $64,416 and $3,928 respectively *** Part 4, from Chicago Bridge & Iron Co., 332 S. Michigan Ave., Chicago, Ill., $11,690 *** Parts 5 and 8 from Provo Bros., Inc., W. Hiawatha Blvd., Syracuse, $87,562 and $77,004 respectively *** Part 7, from Pittsburgh Des Moines Steel Co., 270 Bway., New York, $8,400. CD 9/24—ENR 9/27.

N. C., Fuquay Springs—Town, rejected bids Oct. 29, WW imprvs. Will readvertise. CD 10/23.

★**Pa., Lebanon**—City, City Hall, Oct. 22, water supply line from High Bridge to Lebanon, from Inter-County Constr. Co., Hattsville, Md., $1,181,260***reservoir and dam, from The Kingston Constr. Co., Shenandoah, $550,650***control and treatment house, from H. B. Alexander & Son, Third and Vaughn Sts., Harrisburg, $92,634. Gannett, Fleming, Corddry & Carpenter, 600 North Second St., Harrisburg, engrs. CD 9/5—ENR 9/13.

CONTRACTS AWARDED

O., Wilmington—City, City Hall, low dam, pump. station, earthwork reservoir and c.i. pipelines, at Cowans Creek, near here, to Mauger Constr. Co., 8 E. Long St., Columbus. Est. $200,000. Jones & Henry, Toledo Trust Bldg., Toledo, engrs. Awarded 10/19.

Tex., San Antonio—City Water Bd., 106 W. Market St., water supply station expan., $30,000; laying new c.i. feeder lines off Harlandale, SE sec., $25,000; 12 in. c.i. mains north of St. Cloud Rd. in Woodlawn Hills, $18,000, force account. CD 10/5—ENR 10/18.

Pa., Phila.—City Dpt. P. Wks., City Hall Annex, Torresdale Filter plant addns., alterations, Proj. WW1-251, to Conduit & Foundation Corp. 770 S. Schuykill Ave., $119,518; Queen Lane Filter plant addns., alterations, Contr. WW1-179, to Tuller Constr. Co., 95 Monmouth St., Red Bank, N. J., $71,865. Awarded 10/8.

Man., Winnipeg — Municipality, watermains in Salter St., day labor, $20,000. W. D. Hurst, City Hall, engr.

SEWERS, WASTE DISPOSAL

BIDS ASKED

Bids Asked November 16

D. C., Wash.—At office Director, National Zoological Park, Adams Mill Road near Ontario Pl. N.W., Zone 9, incinerator.

Bids Asked November 21

N. Y., Kings Park—Bureau Contrs. & Accounts, State Office Bldg., Albany, storm water sewer at State Hospital.

LOW BIDDERS

Mich., Ypsilanti—Ypsilanti State Hospital, Ypsilanti, sewage treatment plant, at State Hospital, from Miller Thompson Co., 439 Penobscot Bldg., Detroit, $263,000.

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Puildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads); BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

O., Toledo—Willy-Overland Motors, Inc., Wolcott Bldg., project cancelled, separating and skimming tank and filter plant preventing pollution of creek. $50,000. CD 9/19—ENR 9/27.

CONTRACTS AWARDED

Tex., San Antonio—L. E. Fite & Co., 1001 Donaldson Ave., sanitary sewer collection lines, own forces. $30,000. CD 7/25—ENR 8/9, under Postwar Projects.

BRIDGES

BIDS ASKED

Bids Asked November 13

Virginia — State Dpt. Hys., Richmond, bridge over Goose Creek and 0.155 mi. waterbound macadam surface treatment Route 25, S.P. S-1002-G, B5, Bedford Co. Plans deposit $5.

Bids Asked November 14

New York—Bureau Contrs. & Accounts, Albany, bridges, approaches, DA-SS-45-3, Saratoga Co.

Ont., Whitby—D. J. Kean, engr. Ontario Co., Seagrove, 90 ft. span steel bridge with 24 ft. roadway. $30,000. CD 12/1/43—ENR 12/9/43, under Postwar Projects.

LOW BIDDERS

Ill., Chicago — Clerk Cook Co., County Bldg., Oct. 22, 3 span overhead bridge over C. M. St. P. & P. R. R., Proj. 110-1922.1-MFT, from Thomas McQueen Co., 12[illegible] Circle, Forest Park, $158,764; furnishing 698,915 lb. structural steel for above, Proj. 110-1922.21-MFT, from American Bridge Co., 208 S. LaSalle St., $35,155. G. A. Quinlan, co. supt. hys.

Ill., Dixon—Clerk, Lee Co., Court House, Oct. 20, 3 span steel I-Beam bridge 0.[illegible] mi. Proj. 35 B-15d, from F. F. Wier Construction Co., 427 Fifth Ave. Bldg., Moline, $40,[illegible] F. W. Leake, hy. supt.

CONTRACTS AWARDED

Indiana—State Hy. Comn., Indianapolis, Bridge Contr. 2622, Washington Co. to R. [illegible] Olinger, Huntingburg, $62,852; Bridge Contr. 2591, LaPorte Co., to G. Kruzick, Winamac, $24,833 est. $25,028. Bids 10/30. Rejected bids Oct. 30 Bridges Contr. 2[illegible] Davies Co.; Contr. 2620, Boone Co.; Contr. 2619, Allen Co.; Contr. 2618, Marion Co. Will readvertise. C. E. Vogelsang, Co. owner, ch. engr. CD 10/17—ENR 10/26.

Minn., Minneapolis—City, C. C. Swanson, clk., repairing Wash. Ave. bridge over Mississippi River, day labor, $200,000. F. [illegible] Paul, city engr.

Missouri—State Hy. Comn., Jefferson City, rein.-con. slab span, culvert type bridge, Holt Co., to Clark & Rundquist Const. Co., Savannah, $24,867. Bids 9/14. CD 9/8.

★**N. Y., New York**—Triborough Bridge Auth., Randalls Island, New York, widening, altering, painting Bronx-Whitestone Bridge, and approaches, Contr. WD-46, to Woodcrest Constr. Co., Inc., 369 Lexington Ave., New York, Zone 17, $1,312,225. CD 10/25—ENR 11/1, under LB.

Man., Winnipeg—Municipality, trestle, city yards, day labor, $25,000. W. D. Hurst, city engr.

Quebec—Dpt. P. Wks., Quebec City, [illegible] ft., 3 span rein.-con. bridge over Salvail River, St. Jude de St. Hyacinthe, to Quebmont Constr. Inc., 4757 Papineau Ave., Montreal, approx. $60,000. CD 10/26.

STREETS AND ROADS

BIDS ASKED

Bids Asked November 13

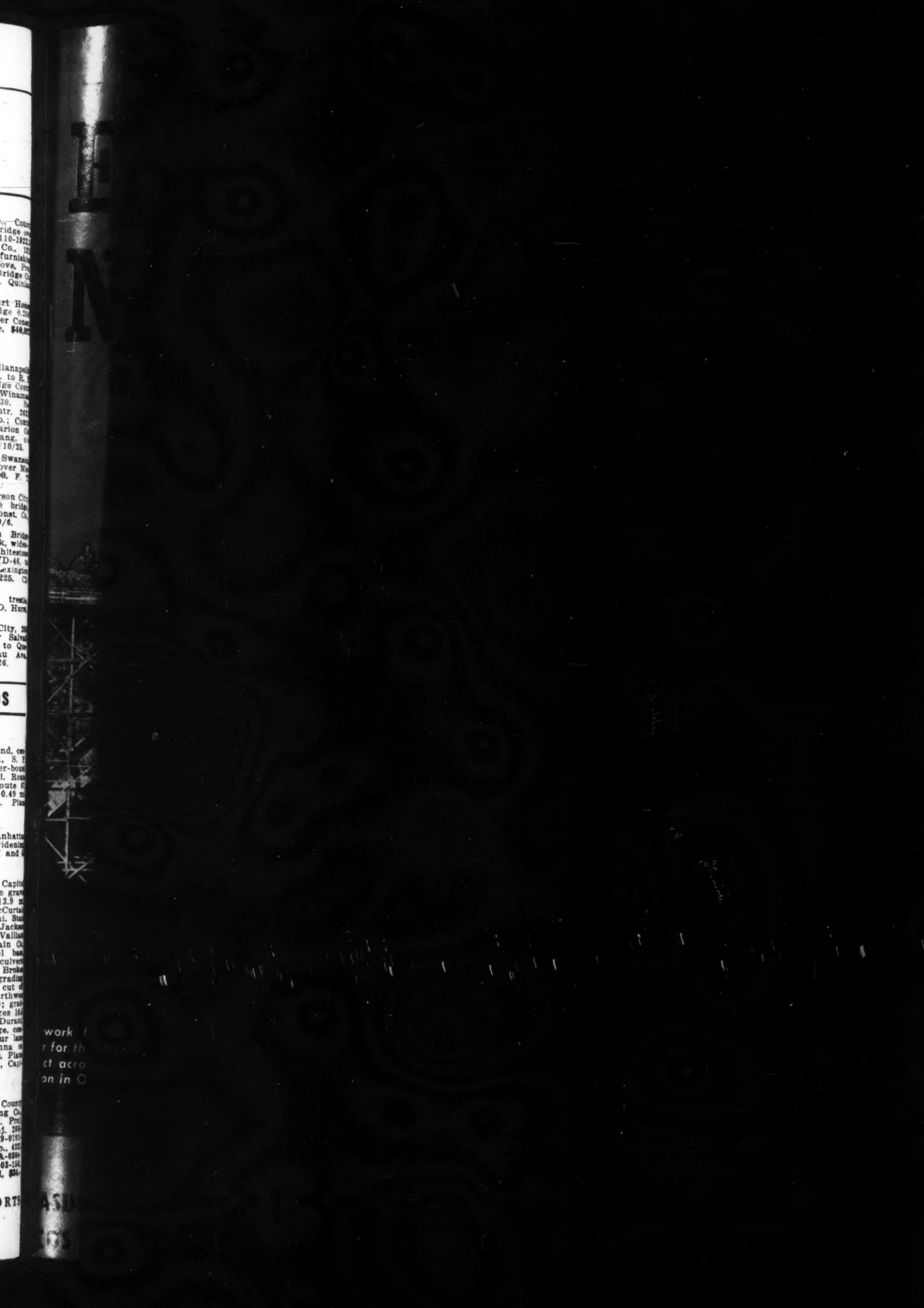
Virginia—State Dpt. Hys., Richmond, concrete widening 0.542 mi. Route 1, S. P. S-1347-BBI, Stafford Co.; water-bound macadam surface treatment 0.16 mi. Route 10, S. P. S-1021-M67; 0.39 mi. Route [illegible] S. P. S-1406-A, both Tazewell Co.; 0.49 mi. Route 42, S. P. SO1408-A, Bland Co. Plans deposit $5 each.

Bids Asked November 14

N. Y., New York—President Manhattan Boro, Municipal Bldg., Zone 7, widening, sheet asphalt repaving 27, 35, 46, 47 and [illegible] Sts.

Bids Asked December 18

★**Oklahoma** — State Hy. Dpt., Capitol, Oklahoma City, grading, drainage, gravel base and rock asphalt surfacing 13.9 mi. U. S. 70 and Sawyer east to McCurtain Co. line, Choctaw Co., $632,000; 5 mi. State Hy. 44, from El Dorado northeast, Jackson Co., $180,000; 3.6 mi. U. S. 70 from Valliant west to Choctaw Co. line, McCurtain Co., $165,000; grading, drainage, gravel base, rock asphalt surfacing and exten. culverts 11.4 mi. U. S. 70 from Idabel to Broken Bow, McCurtain Co., $467,000; grading, drainage, bridges 17.4 mi. on new cut of road on State Hy. 13, from Ada northwest toward Asher, Pontotoc Co., $500,000; grading, drainage, concrete paving, bridges [illegible] mi. U. S. 70 from Washita River to Durant, Bryan Co., $541,000; grading, drainage, concrete paving, 2 bridges 8 mi. on four lane highway from McAlester to Savanna on U. S. Hy. 69, Pittsburg Co., $740,000. Plans deposit 25c per sheet. H. E. Bailey, Capitol, engr.

LOW BIDDERS

Ill., Chicago—Clerk Cook Co., County Bldg., Oct. 22, from Standard Paving Co., 30 N. LaSalle St., imprv. 1.8516 mi. Proj. 360-0506-15d, $51,690; 1.7867 mi. Proj. 0304-15d, $45,031; 1.778 mi. Proj. 069-[illegible] 15d, $55,463***from R. R. Anderson Co., [illegible] W. Harrison St., 1.8172 mi. Proj. 130A-[illegible] 15d, $47,901; 1.539 mi. Proj. 083-0101-15[illegible] $30,918; 1.3153 mi. Proj. 078-0506-15d, $[illegible]